Neither: unresolved and below-threshold genes

561 mapped genes | Alphabetical catalog with a PDF bookmark for every gene

Every entry carries its current classification, cancer occurrence, normal-expression evidence and curated biology. The complete tables retain unabridged annotations, all tumor cohorts, every normal context and source links.

Cancer RNA summaries rank cohorts by the fraction >=5 pTPM (at least 20 measured samples). Cancer IHC summaries rank Medium/High patient counts (at least five scored patients). These are different cohorts and native measures, not assay sensitivity estimates. No values are imputed for missing genes.

Biology excerpts come from reviewed UniProt entries (CC BY 4.0). They preserve qualifications but are not an independent review of every underlying paper. Clinical outcomes are reviewed only for the explicitly marked targets; a trial link alone establishes neither efficacy nor safety.

Read alongside the overview for the threshold grid, priority reconsideration list, known therapeutic risks, assay limitations and unmapped BAGE/GAGE2B records.

Open the searchable atlas and full tables

ABCC12 | Neither / Antibody

ENSG00000140798

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 10 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.3 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 11/50 (22.0%); Glioblastoma Multiforme (validation): 1/58 (1.7%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. prostate cancer: 9/11 (81.8%); stomach cancer: 8/12 (66.7%)

Biology. Probable transporter, its substrate specificity is unknown

Curated tissue note. Expressed in testis (at protein level). Widely expressed at low level (PubMed:11483364, PubMed:11688999, PubMed:12011458, PubMed:17472575). Isoform 5 is specifically expressed in brain, testis and breast ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96J65 | HPA portal (live; not the pinned values)

ACP4 | Neither / Low

ENSG00000142513

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.3 nTPM; small intestine/intestinal goblet cells; hpa_single_cell_tissue; vital; 4.342 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Liver Hepatocellular Carcinoma (TCGA): 9/362 (2.5%); Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Bladder Urothelial Carcinoma (TCGA): 2/169 (1.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Protein tyrosine phosphatase that dephosphorylates the receptor tyrosine-protein kinase ERBB4, thereby inhibiting its ligand-induced proteolytic cleavage (PubMed:15219672). Involved in odontogenesis (PubMed:27843125). Regulates odontoblast cell fate via its extracellular catalytic domain by inhibiting proliferation and promoting differentiation (By similarity)

Curated tissue note. Expressed mainly in the testis. Also expressed in the brain where they are enriched at the postsynaptic sites. Expressed at lower levels in the trachea, prostate, bone marrow, spinal cord, colon, fetal brain, ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9BZG2 | HPA portal (live; not the pinned values)

ACSM4 | Neither / Antibody

ENSG00000215009

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 4.5 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.9839 TPM; blood/MONOCYTES; dice_monocytes; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Colon Adenocarcinoma (validation): 1/486 (0.2%)

Cancer IHC. prostate cancer: 12/12 (100.0%); glioma: 10/11 (90.9%)

Biology. Catalyzes the activation of fatty acids by CoA to produce an acyl-CoA, the first step in fatty acid metabolism (By similarity). Capable of activating medium-chain fatty acids with a preference for C6-12 fatty acids (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0C7M7 | HPA portal (live; not the pinned values)

ACTL9 | Neither / Antibody

ENSG00000181786

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 6.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 1.128 TPM; blood/NK; dice_nk; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. breast cancer: 11/11 (100.0%); ovarian cancer: 11/11 (100.0%)

Biology. Testis-specic protein that plays an important role in fusion of proacrosomal vesicles and perinuclear theca formation

Curated tissue note. Testis-specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8TC94 | HPA portal (live; not the pinned values)

ADAM30 | Neither / Antibody

ENSG00000134249

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.6 nTPM; skeletal muscle/fibroblasts; hpa_single_cell_tissue; vital; 0.4523 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. colorectal cancer: 3/11 (27.3%); ovarian cancer: 3/12 (25.0%)

Biology. Plays a role in lysosomal amyloid precursor protein (APP) processing by cleaving and activating CTSD/cathepsin D which leads to APP degradation (PubMed:27333034)

Curated tissue note. Expressed in brain neurons (at protein level) (PubMed:27333034). Expressed in testis (PubMed:10512762)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9UKF2 | HPA portal (live; not the pinned values)

ADIG | Neither / Antibody

ENSG00000182035

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 5.1 nTPM; kidney/proximal tubular cells; hpa_single_cell_tissue; vital; 1.132 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Thyroid Carcinoma (TCGA): 22/495 (4.4%); Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Kidney Renal Clear Cell Carcinoma (validation): 1/100 (1.0%)

Cancer IHC. breast cancer: 12/12 (100.0%); lung cancer: 11/11 (100.0%)

Biology. Key regulator of lipid storage that promotes the expansion of lipid droplets during the formation of mature adipocytes. Acts by forming a dodecameric complex with seipin (BSCL2) when adipocytes have differentiated and are undergoing maturation. In the dodecameric complex, ADIG antagonizes the activity of BSCL2 by reducing BSCL2-mediated triacylglycerol nucleation and relieving BSCL2's inhibition of GPAT3 and GPAT4. GPAT3 and GPAT4 then ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q0VDE8 | HPA portal (live; not the pinned values)

AKNAD1 | Neither / Antibody

ENSG00000162641

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 24 nTPM; esophagus/schwann cells; hpa_single_cell_tissue; protected; 0.4245 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Glioblastoma Multiforme (validation): 13/58 (22.4%); Bladder Urothelial Carcinoma (TCGA): 2/169 (1.2%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. colorectal cancer: 6/12 (50.0%); breast cancer: 5/11 (45.5%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5T1N1 | HPA portal (live; not the pinned values)

AMELY | Neither / Low

ENSG00000099721

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.3 nTPM; tongue/suprabasal keratinocytes; hpa_single_cell_tissue; protected; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Kidney Chromophobe (TCGA): 1/64 (1.6%); Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Plays a role in biomineralization. Seems to regulate the formation of crystallites during the secretory stage of tooth enamel development. Thought to play a major role in the structural organization and mineralization of developing enamel

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q99218 | HPA portal (live; not the pinned values)

ANHX | Neither / Low

ENSG00000227059

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.1656 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 73/133 (54.9%); Ovary Serous Cystadenocarcinoma (TCGA): 5/349 (1.4%); Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt E9PGG2 | HPA portal (live; not the pinned values)

ANKRD60 | Neither / Antibody

ENSG00000124227

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.373 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 0.9778 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. liver cancer: 4/9 (44.4%); stomach cancer: 1/11 (9.1%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9BZ19 | HPA portal (live; not the pinned values)

ANTXRL | Neither / Screening

ENSG00000274209

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 3.237 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 2.304 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (TCGA): 6/349 (1.7%); Kidney Renal Clear Cell Carcinoma (validation): 1/100 (1.0%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NF34 | HPA portal (live; not the pinned values)

ARGFX | Neither / Antibody

ENSG00000186103

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 6.3 nTPM; heart muscle/endothelial cells; hpa_single_cell_tissue; vital; 3.8 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 29/133 (21.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 15/176 (8.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 16/283 (5.7%)

Cancer IHC. breast cancer: 1/12 (8.3%); cervical cancer: 0/11 (0.0%)

Biology. Transcription factor that acts as activator

Curated tissue note. Expressed at low level in testis and undifferentiated embryonic stem cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NJG6 | HPA portal (live; not the pinned values)

ARL13A | Neither / Antibody

ENSG00000174225

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.4 nTPM; eye/muller glia cells; hpa_single_cell_tissue; vital; 9.151 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 4/283 (1.4%); Rectum Adenocarcinoma (validation): 2/207 (1.0%); Colon Adenocarcinoma (validation): 4/486 (0.8%)

Cancer IHC. breast cancer: 12/12 (100.0%); liver cancer: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5H913 | HPA portal (live; not the pinned values)

ARL14EPL | Neither / Cellular

ENSG00000268223

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 7.4 nTPM; colon/undifferentiated cells; hpa_single_cell_tissue; protected; 2.087 TPM; blood/M2; dice_m2; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Uterine Corpus Endometrial Carcinoma (TCGA): 3/176 (1.7%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DKL9 | HPA portal (live; not the pinned values)

ARMH2 | Neither / Cellular

ENSG00000260286

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 4.4 nTPM; lung/ciliated cells; hpa_single_cell_tissue; vital; 16.59 TPM; blood/NK; dice_nk; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt H3BNL8 | HPA portal (live; not the pinned values)

ATXN3L | Neither / Antibody

ENSG00000123594

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.8005 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. colorectal cancer: 10/12 (83.3%); breast cancer: 9/11 (81.8%)

Biology. Deubiquitinating enzyme that cleaves both 'Lys-48'-linked and 'Lys-63'-linked poly-ubiquitin chains (in vitro) (PubMed:21118805). Acts as a deubiquitinating enzyme for the transcription factor KLF5, playing a role in the regulation of KLF5 stability (PubMed:26079537)

Curated tissue note. Widely expressed

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H3M9 | HPA portal (live; not the pinned values)

BHLHE23 | Neither / Antibody

ENSG00000125533

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.4 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 0.2348 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 4/133 (3.0%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. cervical cancer: 12/12 (100.0%); colorectal cancer: 12/12 (100.0%)

Biology. May function as transcriptional repressor. May modulate the expression of genes required for the differentiation and/or maintenance of pancreatic and neuronal cell types. May be important for rod bipolar cell maturation (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NDY6 | HPA portal (live; not the pinned values)

BLID | Neither / Low

ENSG00000259571

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 3.1 nTPM; skeletal muscle/fibroblasts; hpa_single_cell_tissue; vital; 1.843 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 39/58 (67.2%); Kidney Chromophobe (TCGA): 1/64 (1.6%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Functions as a proapoptotic molecule through the caspase-dependent mitochondrial pathway of cell death

Curated tissue note. Ubiquitously expressed

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IZY5 | HPA portal (live; not the pinned values)

BMP15 | Neither / Low

ENSG00000130385

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; lung/ciliated cells; hpa_single_cell_tissue; vital; 0.2784 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in follicular development. Oocyte-specific growth/differentiation factor that stimulates folliculogenesis and granulosa cell (GC) growth

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O95972 | HPA portal (live; not the pinned values)

BPIFB3 | Neither / Antibody

ENSG00000186190

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 9.5 nTPM; pbmc/platelets; hpa_single_cell_tissue; vital; 0.2025 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (TCGA): 22/349 (6.3%); Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. breast cancer: 5/12 (41.7%); prostate cancer: 4/10 (40.0%)

Biology. May have the capacity to recognize and bind specific classes of odorants. May act as a carrier molecule, transporting odorants across the mucus layer to access receptor sites. May serve as a primary defense mechanism by recognizing and removing potentially harmful odorants or pathogenic microorganisms from the mucosa or clearing excess odorant from mucus to enable new odorant stimuli to be received (By similarity)

Curated tissue note. Detected in nasal septal epithelium

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P59826 | HPA portal (live; not the pinned values)

BPY2 | Neither / Low

ENSG00000183753

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; kidney/bulk; hpa_rna_consensus; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Expressed exclusively in testis. Expressed in ejaculated spermatozoa of germ cell. Expressed in the nuclei of spermatogonia, spermatocytes, and round spermatids, except elongated spermatids (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O14599 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

BPY2B | Neither / Low

ENSG00000183795

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; kidney/bulk; hpa_rna_consensus; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Expressed exclusively in testis. Expressed in ejaculated spermatozoa of germ cell. Expressed in the nuclei of spermatogonia, spermatocytes, and round spermatids, except elongated spermatids (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O14599 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

BPY2C | Neither / Low

ENSG00000185894

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; kidney/bulk; hpa_rna_consensus; vital; 0.1174 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Expressed exclusively in testis. Expressed in ejaculated spermatozoa of germ cell. Expressed in the nuclei of spermatogonia, spermatocytes, and round spermatids, except elongated spermatids (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O14599 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

BRDT | Neither / Cellular

ENSG00000137948

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 17.7 nTPM; bronchus/smooth muscle cells; hpa_single_cell_tissue; vital; 6 TPM; blood/Effector memory CD8 T-cell; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 103/133 (77.4%); Lung Adenocarcinoma (validation): 29/105 (27.6%); Lung Adenocarcinoma (TCGA): 107/497 (21.5%)

Cancer IHC. cervical cancer: 12/12 (100.0%); glioma: 12/12 (100.0%)

Biology. Testis-specific chromatin protein that specifically binds histone H4 acetylated at 'Lys-5' and 'Lys-8' (H4K5ac and H4K8ac, respectively) and plays a key role in spermatogenesis (PubMed:22464331, PubMed:22901802). Required in late pachytene spermatocytes: plays a role in meiotic and post-meiotic cells by binding to acetylated histones at the promoter of specific meiotic and post-meiotic genes, facilitating their activation at the ... [full text in table]

Curated tissue note. Testis-specific. A 3-fold higher expression is seen in adult testis than in embryo testis. Expression seems to be correlated with histone H4 hyperacetylation during the haploid phase of spermatogenesis ... [full text in table]

Reconsideration. Reconcile Monaco CD8/basophil RNA with the much lower DICE values and obtain relevant protein evidence.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q58F21 | HPA portal (live; not the pinned values)

BSX | Neither / Antibody

ENSG00000188909

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.9 nTPM; hypothalamus/bulk; hpa_rna_consensus; vital; 0.3998 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 2/283 (0.7%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. breast cancer: 12/12 (100.0%); glioma: 11/11 (100.0%)

Biology. DNA binding protein that function as transcriptional activator. Is essential for normal postnatal growth and nursing. Is an essential factor for neuronal neuropeptide Y and agouti-related peptide function and locomotory behavior in the control of energy balance (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q3C1V8 | HPA portal (live; not the pinned values)

BTBD18 | Neither / Antibody

ENSG00000233436

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.8 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 2.293 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 6/207 (2.9%); Colon Adenocarcinoma (validation): 11/486 (2.3%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. glioma: 6/11 (54.5%); melanoma: 3/10 (30.0%)

Biology. Specifically required during spermatogenesis to promote expression of piRNA precursors. The piRNA metabolic process mediates the repression of transposable elements during meiosis by forming complexes composed of piRNAs and Piwi proteins and governs the methylation and subsequent repression of transposons, which is essential for the germline integrity. Acts by facilitating transcription elongation at piRNA loci during pachytene

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt B2RXH4 | HPA portal (live; not the pinned values)

C11orf91 | Neither / Antibody

ENSG00000205177

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 4.6 nTPM; adipose tissue/bulk; hpa_rna_consensus; manageable; 2.212 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Kidney Chromophobe (TCGA): 6/64 (9.4%); Pancreatic Adenocarcinoma (TCGA): 6/176 (3.4%); Liver Hepatocellular Carcinoma (validation): 5/231 (2.2%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q3C1V1 | HPA portal (live; not the pinned values)

C1QL4 | Neither / Low

ENSG00000186897

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 5.7 nTPM; unsited/Horizontal cells; hpa_single_cell; unresolved; 0.2301 TPM; blood/TH17; dice_th17; vital

Cancer RNA. Glioblastoma Multiforme (validation): 19/58 (32.8%); Kidney Renal Clear Cell Carcinoma (TCGA): 164/521 (31.5%); Glioblastoma Multiforme (TCGA): 37/141 (26.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May regulate the number of excitatory synapses that are formed on hippocampus neurons. Has no effect on inhibitory synapses (By similarity). May inhibit adipocyte differentiation at an early stage of the process (By similarity)

Curated tissue note. Highest expression levels in testis and adipose tissue, lower levels in skeletal muscle and kidney

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q86Z23 | HPA portal (live; not the pinned values)

C1orf146 | Neither / Screening

ENSG00000203910

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 2.4 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 6.39 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 3/133 (2.3%); Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 3/283 (1.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Plays a key role in reinforcing the integrity of the central element of the synaptonemal complex (SC) thereby stabilizing SC, ensuring progression of meiotic prophase I in male and female germ cells (By similarity). Promotes homologous recombination and crossing-over in meiotic prophase I via its association with SHOC1 (By similarity). Required for the localization of TEX11 and MSH4 to recombination intermediates (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5VVC0 | HPA portal (live; not the pinned values)

C1orf202 | Neither / Screening

ENSG00000284188

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 6.1 nTPM; unsited/Distal tubular cells; hpa_single_cell; unresolved; 1.965 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Glioblastoma Multiforme (TCGA): 1/141 (0.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1W2PPE3 | HPA portal (live; not the pinned values)

C3orf20 | Neither / Antibody

ENSG00000131379

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 12.1 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 5.727 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Glioblastoma Multiforme (validation): 4/58 (6.9%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. melanoma: 8/12 (66.7%); prostate cancer: 8/12 (66.7%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8ND61 | HPA portal (live; not the pinned values)

C4orf17 | Neither / Antibody

ENSG00000138813

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.697 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Lung Squamous Cell Carcinoma (TCGA): 3/489 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/10 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q53FE4 | HPA portal (live; not the pinned values)

C7orf33 | Neither / Low

ENSG00000170279

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 10.2 nTPM; unsited/Cone photoreceptor cells; hpa_single_cell; unresolved; 1.209 TPM; blood/MONOCYTES; dice_monocytes; vital

Cancer RNA. Lung Squamous Cell Carcinoma (validation): 2/68 (2.9%); Bladder Urothelial Carcinoma (TCGA): 4/169 (2.4%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8WU49 | HPA portal (live; not the pinned values)

C8orf74 | Neither / Antibody

ENSG00000171060

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.6 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.2053 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6P047 | HPA portal (live; not the pinned values)

C9orf43 | Neither / Cellular

ENSG00000157653

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 14.5 nTPM; liver/b-cells; hpa_single_cell_tissue; vital; 18.3 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 8/50 (16.0%); Glioblastoma Multiforme (validation): 3/58 (5.2%); Kidney Renal Papillary Cell Carcinoma (TCGA): 7/282 (2.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8TAL5 | HPA portal (live; not the pinned values)

CAGE1 | Neither / Antibody

ENSG00000164304

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 9.1 nTPM; breast/macrophages; hpa_single_cell_tissue; vital; 1.277 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 4/231 (1.7%); Uterine Corpus Endometrial Carcinoma (TCGA): 3/176 (1.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. colorectal cancer: 12/12 (100.0%); breast cancer: 11/11 (100.0%)

Biology. Testis-specific expression in normal tissues, but wide expression among cancer tissues and cell lines

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8TC20 | HPA portal (live; not the pinned values)

CAPN11 | Neither / Cellular

ENSG00000137225

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 19 nTPM; pbmc/platelets; hpa_single_cell_tissue; vital; 7.729 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 27/50 (54.0%); Kidney Renal Clear Cell Carcinoma (validation): 4/100 (4.0%); Skin Cuteneous Melanoma (TCGA): 2/99 (2.0%)

Cancer IHC. urothelial cancer: 2/11 (18.2%); ovarian cancer: 2/12 (16.7%)

Biology. Calcium-regulated non-lysosomal thiol-protease which catalyzes limited proteolysis of substrates involved in cytoskeletal remodeling and signal transduction

Curated tissue note. Highest expression in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9UMQ6 | HPA portal (live; not the pinned values)

CCDC166 | Neither / Antibody

ENSG00000255181

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.8 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 0.4934 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Stomach Adenocarcinoma (TCGA): 1/346 (0.3%); Lung Squamous Cell Carcinoma (TCGA): 1/489 (0.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. testis cancer: 12/12 (100.0%); pancreatic cancer: 7/10 (70.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0CW27 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CCDC168 | Neither / Antibody

ENSG00000175820

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 13 nTPM; heart muscle/cardiomyocytes; hpa_single_cell_tissue; vital; 1.162 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NDH2 | HPA portal (live; not the pinned values)

CCDC169-SOHLH2 | Neither / Screening

ENSG00000250709

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.7 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 1.3 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Kidney Renal Papillary Cell Carcinoma (TCGA): 2/282 (0.7%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Transcription regulator of both male and female germline differentiation. Suppresses genes involved in spermatogonial stem cells maintenance, and induces genes important for spermatogonial differentiation. Coordinates oocyte differentiation without affecting meiosis I (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9NX45 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CCDC182 | Neither / Antibody

ENSG00000166329

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.7 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 1.285 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. prostate cancer: 12/12 (100.0%); colorectal cancer: 11/12 (91.7%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NF36 | HPA portal (live; not the pinned values)

CCDC183 | Neither / Antibody

ENSG00000213213

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 30 nTPM; adipose tissue/dendritic cells; hpa_single_cell_tissue; vital; 4.805 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 31/80 (38.8%); Ovary Serous Cystadenocarcinoma (validation): 2/81 (2.5%); Rectum Adenocarcinoma (validation): 5/207 (2.4%)

Cancer IHC. colorectal cancer: 5/10 (50.0%); breast cancer: 5/11 (45.5%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5T5S1 | HPA portal (live; not the pinned values)

CCDC197 | Neither / Screening

ENSG00000175699

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.1 nTPM; skin/macrophages; hpa_single_cell_tissue; vital; 0.6932 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NCU1 | HPA portal (live; not the pinned values)

CCDC62 | Neither / Cellular

ENSG00000130783

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 19 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 10.96 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 16/58 (27.6%); Testicular Germ Cell Tumor (TCGA): 5/133 (3.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 5/176 (2.8%)

Cancer IHC. colorectal cancer: 1/12 (8.3%); breast cancer: 0/10 (0.0%)

Biology. Nuclear receptor coactivator that can enhance preferentially estrogen receptors ESR1 and ESR2 transactivation. Also modulates progesterone/PGR, glucocorticoid/NR3C1 and androgen/AR receptors transactivation, although at lower level; little effect on vitamin D receptor/VDR. Required for normal spermiogenesis. It probably plays a role in acrosome formation (By similarity)

Curated tissue note. Highly expressed in adult testis. Expressed in both prostate epithelial and stromal cells, with predominant expression in epithelial cells (at protein level) (PubMed:19126643). Not detected in prostate by ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6P9F0 | HPA portal (live; not the pinned values)

CCDC73 | Neither / Antibody

ENSG00000186714

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 7.2 nTPM; unsited/Microglial cells; hpa_single_cell; unresolved; 0.8452 TPM; blood/intermediate monocyte; hpa_immune_cell_samples; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 204/231 (88.3%); Uterine Corpus Endometrial Carcinoma (TCGA): 54/176 (30.7%); Breast Invasive Carcinoma (validation): 5/50 (10.0%)

Cancer IHC. colorectal cancer: 12/12 (100.0%); liver cancer: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZRK6 | HPA portal (live; not the pinned values)

CCIN | Neither / Cellular

ENSG00000185972

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 6.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 11.73 TPM; blood/MONOCYTES; dice_monocytes; vital

Cancer RNA. Glioblastoma Multiforme (validation): 3/58 (5.2%); Breast Invasive Carcinoma (validation): 1/50 (2.0%); Ovary Serous Cystadenocarcinoma (TCGA): 6/349 (1.7%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Required for both nuclear and acrosomal shaping during spermiogenesis

Curated tissue note. Expressed in testis, in spermatozoa (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q13939 | HPA portal (live; not the pinned values)

CDC20B | Neither / Antibody

ENSG00000164287

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 27.5 nTPM; bronchus/ciliated cells; hpa_single_cell_tissue; vital; 0.8674 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 12/50 (24.0%); Uterine Corpus Endometrial Carcinoma (TCGA): 40/176 (22.7%); Ovary Serous Cystadenocarcinoma (TCGA): 53/349 (15.2%)

Cancer IHC. colorectal cancer: 9/10 (90.0%); liver cancer: 9/11 (81.8%)

Biology. Protein regulator of centriole-deuterosome disengagement and subsequently participates in the ciliogenesis in multiciliated cells (MCCs)

Curated tissue note. Expressed in multiciliated cells (MCCs)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q86Y33 | HPA portal (live; not the pinned values)

CDKL4 | Neither / Antibody

ENSG00000205111

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 7.7 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 9.022 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Glioblastoma Multiforme (validation): 33/58 (56.9%); Testicular Germ Cell Tumor (TCGA): 3/133 (2.3%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. lung cancer: 1/8 (12.5%); breast cancer: 1/10 (10.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5MAI5 | HPA portal (live; not the pinned values)

CDRT15 | Neither / Antibody

ENSG00000223510

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.2 nTPM; skin/bulk; hpa_rna_consensus; manageable; 18.81 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 11/133 (8.3%); Bladder Urothelial Carcinoma (TCGA): 12/169 (7.1%); Skin Cuteneous Melanoma (TCGA): 7/99 (7.1%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. Expressed in fetal heart, kidney, liver, lung and spleen

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96T59 | HPA portal (live; not the pinned values)

CDY1 | Neither / Screening

ENSG00000172288

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. liver cancer: 4/11 (36.4%); breast cancer: 0/12 (0.0%)

Biology. Has histone acetyltransferase activity, with a preference for histone H4

Curated tissue note. Testis-specific. Detected in spermatids (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y6F8 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CDY1B | Neither / Screening

ENSG00000172352

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. liver cancer: 4/11 (36.4%); breast cancer: 0/12 (0.0%)

Biology. Has histone acetyltransferase activity, with a preference for histone H4

Curated tissue note. Testis-specific. Detected in spermatids (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y6F8 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CEP295NL | Neither / Antibody

ENSG00000178404

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 13.05 nTPM; blood/memory B-cell; hpa_immune_cell_samples; vital; 7.65 TPM; blood/M2; dice_m2; vital

Cancer RNA. Glioblastoma Multiforme (validation): 24/58 (41.4%); Pancreatic Adenocarcinoma (validation): 15/80 (18.8%); Rectum Adenocarcinoma (validation): 7/207 (3.4%)

Cancer IHC. endometrial cancer: 9/12 (75.0%); colorectal cancer: 8/12 (66.7%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96MC4 | HPA portal (live; not the pinned values)

CGB2 | Neither / Selectivity

ENSG00000104818

Decision. Insufficient reproductive enrichment; selectivity alone is not proof of unsafe targeting.

Normal RNA / IHC. 1.5 nTPM; pancreas/mixed cell types; hpa_single_cell_tissue; vital; 1.012 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (TCGA): 37/349 (10.6%); Uterine Corpus Endometrial Carcinoma (TCGA): 10/176 (5.7%); Testicular Germ Cell Tumor (TCGA): 7/133 (5.3%)

Cancer IHC. urothelial cancer: 1/10 (10.0%); breast cancer: 0/10 (0.0%)

Biology. Expressed in placenta, testis and pituitary

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6NT52 | HPA portal (live; not the pinned values)

CIB3 | Neither / Antibody

ENSG00000141977

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 8.9 nTPM; colon/distal enterocytes; hpa_single_cell_tissue; protected; 7.16 TPM; blood/NK; dice_nk; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 31/50 (62.0%); Breast Invasive Carcinoma (TCGA): 39/1022 (3.8%); Ovary Serous Cystadenocarcinoma (TCGA): 2/349 (0.6%)

Cancer IHC. testis cancer: 12/12 (100.0%); colorectal cancer: 11/12 (91.7%)

Biology. Acts a an auxiliary subunit of the sensory mechanoelectrical transduction (MET) channel in hair cells (By similarity). Plays a role in regulating hair cell MET channel localization and function (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96Q77 | HPA portal (live; not the pinned values)

CIB4 | Neither / Antibody

ENSG00000157884

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 5.8 nTPM; unsited/Collecting duct cells; hpa_single_cell; unresolved; 0.2019 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Kidney Renal Clear Cell Carcinoma (validation): 22/100 (22.0%); Kidney Renal Clear Cell Carcinoma (TCGA): 81/521 (15.5%); Thyroid Carcinoma (TCGA): 39/495 (7.9%)

Cancer IHC. colorectal cancer: 10/11 (90.9%); liver cancer: 10/11 (90.9%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0PJX0 | HPA portal (live; not the pinned values)

CLDN34 | Neither / Low

ENSG00000234469

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 4.7 nTPM; liver/hepatocytes; hpa_single_cell_tissue; vital; 0.8416 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Plays a major role in tight junction-specific obliteration of the intercellular space, through calcium-independent cell-adhesion activity

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt H7C241 | HPA portal (live; not the pinned values)

CLEC20A | Neither / Cellular

ENSG00000188585

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 25.3 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 15.82 TPM; blood/naive B-cell; hpa_immune_cell_samples; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 4/169 (2.4%); Testicular Germ Cell Tumor (TCGA): 3/133 (2.3%); Kidney Renal Papillary Cell Carcinoma (TCGA): 4/282 (1.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZU45 | HPA portal (live; not the pinned values)

CLRN2 | Neither / Antibody

ENSG00000249581

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.2 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.7642 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. liver cancer: 6/11 (54.5%); lung cancer: 4/10 (40.0%)

Biology. Plays a key role to hearing function. Required for normal organization and maintenance of the stereocilia bundle and for mechano-electrical transduction

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0PK11 | HPA portal (live; not the pinned values)

CNGA2 | Neither / Antibody

ENSG00000183862

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.0409 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 0.1011 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 1/50 (2.0%); Breast Invasive Carcinoma (TCGA): 9/1022 (0.9%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. liver cancer: 3/12 (25.0%); pancreatic cancer: 2/9 (22.2%)

Biology. Pore-forming subunit of the olfactory cyclic nucleotide-gated channel. Operates in the cilia of olfactory sensory neurons where chemical stimulation of the odorant is converted to an electrical signal. Mediates odorant-induced cAMP-dependent Ca(2+) influx triggering neuron depolarization. The rise of intracellular Ca(2+) levels potentiates the olfactory response by activating Ca(2+)-dependent Cl(-) channels, but it also serves as a ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q16280 | HPA portal (live; not the pinned values)

CSAG1 | Neither / Low

ENSG00000198930

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.2 nTPM; eye/muller glia cells; hpa_single_cell_tissue; vital; 0.3039 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 51/99 (51.5%); Stomach Adenocarcinoma (TCGA): 97/346 (28.0%); Lung Squamous Cell Carcinoma (TCGA): 134/489 (27.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play an important role in maintaining centrosome integrity during mitosis

Curated tissue note. Expressed in chondrosarcoma, melanoma, cartilage and testis, but not in other normal tissues

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6PB30 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CSAG2 | Neither / Low

ENSG00000268902

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1 nTPM; lymph node/bulk; hpa_rna_consensus; protected; 0.3 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Head and Neck Squamous Cell Carcinoma (TCGA): 154/492 (31.3%); Lung Squamous Cell Carcinoma (TCGA): 153/489 (31.3%); Skin Cuteneous Melanoma (TCGA): 26/99 (26.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

CSAG3 | Neither / Low

ENSG00000268916

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.2 nTPM; spleen/bulk; hpa_rna_consensus; manageable; 1.1 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 38/99 (38.4%); Lung Squamous Cell Carcinoma (validation): 25/68 (36.8%); Lung Squamous Cell Carcinoma (TCGA): 165/489 (33.7%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Drug-resistance related protein, its expression is associated with the chemotherapy resistant and neoplastic phenotype. May also be linked to the malignant phenotype

Curated tissue note. Weakly expressed in kidney. Expressed in various tumor cell lines including carcinomas, myeloid and lymphoid malignancies, melanomas and prostate cancer. Overexpressed in taxol-resistant breast cancer line MDA ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y5P2 | HPA portal (live; not the pinned values)

CSNK1A1L | Neither / Cellular

ENSG00000180138

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 16 nTPM; bronchus/smooth muscle cells; hpa_single_cell_tissue; vital; 9.6 TPM; blood/neutrophil; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Casein kinases are operationally defined by their preferential utilization of acidic proteins such as caseins as substrates. It can phosphorylate a large number of proteins. Participates in Wnt signaling (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N752 | HPA portal (live; not the pinned values)

CSNK2A2IP | Neither / Screening

ENSG00000283434

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.9 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.4364 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Stomach Adenocarcinoma (TCGA): 1/346 (0.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in chromatin regulation of male germ cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GTH6 | HPA portal (live; not the pinned values)

CST9 | Neither / Antibody

ENSG00000173335

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.3 nTPM; esophagus/fibroblasts; hpa_single_cell_tissue; protected; 0.398 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 23/50 (46.0%); Breast Invasive Carcinoma (TCGA): 226/1022 (22.1%); Lung Squamous Cell Carcinoma (validation): 1/68 (1.5%)

Cancer IHC. prostate cancer: 12/12 (100.0%); liver cancer: 10/11 (90.9%)

Biology. May be involved in testis development (By similarity). May play a role in hematopoietic differentiation or inflammation (PubMed:12535658). Has immunomodulatory and antimicrobial functions against Francisella tularensis, a Gram-negative bacteria (PubMed:23922243)

Curated tissue note. Expressed in heart, placenta, lung, liver, skeletal muscle and pancreas (PubMed:12535658). Not expressed in brain (PubMed:12535658). Expressed in epididymis, kidney, testis, spinal cord, and thymus with a ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5W186 | HPA portal (live; not the pinned values)

CSTL1 | Neither / Low

ENSG00000125823

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1 nTPM; unsited/Skeletal myocytes; hpa_single_cell; unresolved; 2.316 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 9/283 (3.2%); Breast Invasive Carcinoma (validation): 1/50 (2.0%); Lung Squamous Cell Carcinoma (validation): 1/68 (1.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H114 | HPA portal (live; not the pinned values)

CT45A8 | Neither / Unassessed

ENSG00000278085

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.1 nTPM; basal ganglia/bulk; hpa_rna_consensus; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Lung Squamous Cell Carcinoma (validation): 5/68 (7.4%); Lung Squamous Cell Carcinoma (TCGA): 15/489 (3.1%); Ovary Serous Cystadenocarcinoma (TCGA): 10/349 (2.9%)

Cancer IHC. ovarian cancer: 4/10 (40.0%); testis cancer: 3/12 (25.0%)

Biology. Testis specific. Expressed in cancer cell lines

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5DJT8 | UniProt P0DMV1 | UniProt P0DMV2 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CT45A9 | Neither / Unassessed

ENSG00000270946

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.1 nTPM; basal ganglia/bulk; hpa_rna_consensus; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Lung Squamous Cell Carcinoma (validation): 10/68 (14.7%); Ovary Serous Cystadenocarcinoma (TCGA): 45/349 (12.9%); Lung Squamous Cell Carcinoma (TCGA): 50/489 (10.2%)

Cancer IHC. ovarian cancer: 4/10 (40.0%); testis cancer: 3/12 (25.0%)

Biology. Testis specific. Expressed in cancer cell lines

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5DJT8 | UniProt P0DMV1 | UniProt P0DMV2 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CT47C1 | Neither / Screening

ENSG00000277535

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.011 nTPM; blood/MAIT T-cell; hpa_immune_cell_samples; vital; 0.2939 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A0U1RQG5 | HPA portal (live; not the pinned values)

CTAG2 | Neither / Variable

ENSG00000126890

Decision. Vital-organ donor RNA varies from reported zero to a failing value; negative IHC is from other specimens.

Normal RNA / IHC. 24.9 nTPM; bronchus/basal respiratory cells; hpa_single_cell_tissue; vital; 5.075 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 35/133 (26.3%); Skin Cuteneous Melanoma (TCGA): 25/99 (25.3%); Bladder Urothelial Carcinoma (TCGA): 39/169 (23.1%)

Cancer IHC. colorectal cancer: 5/11 (45.5%); lung cancer: 4/12 (33.3%)

Biology. Testis and very low level in placenta and in some uterus samples. Observed in 25-50% of tumor samples of melanomas, non-small-cell lung carcinomas, bladder, prostate and head and neck cancers

Reconsideration. Resolve donor variability and obtain paired RNA/protein information from the implicated cardiac context.

Therapeutic evidence. Clinical outcomes.

UniProt O75638 | Reviewed source 1 | Reviewed source 2 | HPA portal (live; not the pinned values)

CTAGE1 | Neither / Antibody

ENSG00000212710

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.9 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.3884 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. stomach cancer: 11/11 (100.0%); endometrial cancer: 10/10 (100.0%)

Biology. Testis. Not found in tumor | Testis. Expressed in several cutaneous T-cell lymphoma (CTCL) cell lines, in head-neck carcinomas and carcinoma of ovarian tissues

Reconsideration. Use independently validated protein evidence to adjudicate primary staining conflicts.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96RT6 | UniProt Q9HC47 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CTAGE6 | Neither / Antibody

ENSG00000271321

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.2 nTPM; pancreas/exocrine glandular cells; hpa_single_cell_tissue; vital; 0.9983 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 16/50 (32.0%); Glioblastoma Multiforme (validation): 1/58 (1.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. stomach cancer: 11/11 (100.0%); endometrial cancer: 10/10 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q86UF2 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CTAGE9 | Neither / Antibody

ENSG00000236761

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 9.8 nTPM; rectum/intestinal goblet cells; hpa_single_cell_tissue; protected; 4.5 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 47/50 (94.0%); Kidney Renal Clear Cell Carcinoma (TCGA): 6/521 (1.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%)

Cancer IHC. stomach cancer: 11/11 (100.0%); endometrial cancer: 10/10 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A4FU28 | HPA portal (live; not the pinned values)

CXorf49 | Neither / Low

ENSG00000215115

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Stomach Adenocarcinoma (TCGA): 7/346 (2.0%); Ovary Serous Cystadenocarcinoma (validation): 1/81 (1.2%); Liver Hepatocellular Carcinoma (TCGA): 3/362 (0.8%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A8MYA2 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CXorf49B | Neither / Low

ENSG00000215113

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.9 nTPM; placenta/mixed immune cells; hpa_single_cell_tissue; vital; 0.0068 TPM; blood/myeloid DC; hpa_immune_cell_samples; vital

Cancer RNA. Stomach Adenocarcinoma (TCGA): 7/346 (2.0%); Breast Invasive Carcinoma (validation): 1/50 (2.0%); Ovary Serous Cystadenocarcinoma (validation): 1/81 (1.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A8MYA2 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CXorf51A | Neither / Screening

ENSG00000224440

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.0501 nTPM; blood/naive CD4 T-cell; hpa_immune_cell_samples; vital; 0.0408 TPM; blood/naive CD4 T-cell; hpa_immune_cell_samples; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GTR3 | UniProt P0DPH9 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

CXorf58 | Neither / Antibody

ENSG00000165182

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 6.5 nTPM; bronchus/ciliated cells; hpa_single_cell_tissue; vital; 2.7 TPM; blood/T-reg; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%)

Cancer IHC. colorectal cancer: 12/12 (100.0%); renal cancer: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96LI9 | HPA portal (live; not the pinned values)

DAZ1 | Neither / Cellular

ENSG00000188120

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 22.4 nTPM; unsited/Gastric mucus-secreting cells; hpa_single_cell; unresolved; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 10/80 (12.5%); Rectum Adenocarcinoma (validation): 2/207 (1.0%); Prostate Adenocarcinoma (TCGA): 2/480 (0.4%)

Cancer IHC. liver cancer: 1/12 (8.3%); testis cancer: 1/12 (8.3%)

Biology. RNA-binding protein that plays an essential role in spermatogenesis. May act by binding to the 3'-UTR of mRNAs and regulating their translation | RNA-binding protein that plays an essential role in spermatogenesis. May act by binding to the 3'-UTR of mRNAs and regulating their translation. Promotes germ-cell progression to meiosis and formation of haploid germ cells

Curated tissue note. Testis-specific. Expression restricted to premeiotic germ cells, particularly in spermatogonia (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q86SG3 | UniProt Q9NQZ3 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DAZ2 | Neither / Selectivity

ENSG00000205944

Decision. Insufficient reproductive enrichment; selectivity alone is not proof of unsafe targeting.

Normal RNA / IHC. 5.2 nTPM; stomach/bulk; hpa_rna_consensus; protected; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Stomach Adenocarcinoma (TCGA): 58/346 (16.8%); Pancreatic Adenocarcinoma (validation): 5/80 (6.2%); Glioblastoma Multiforme (TCGA): 8/141 (5.7%)

Cancer IHC. liver cancer: 1/12 (8.3%); testis cancer: 1/12 (8.3%)

Biology. RNA-binding protein that plays an essential role in spermatogenesis. May act by binding to the 3'-UTR of mRNAs and regulating their translation

Curated tissue note. Testis specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q13117 | HPA portal (live; not the pinned values)

DAZL | Neither / Cellular

ENSG00000092345

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 2.7 nTPM; unsited/Lymphatic endothelial cells; hpa_single_cell; unresolved; 8.913 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 50/133 (37.6%); Lung Adenocarcinoma (validation): 1/105 (1.0%); Stomach Adenocarcinoma (TCGA): 2/346 (0.6%)

Cancer IHC. testis cancer: 3/12 (25.0%); breast cancer: 0/11 (0.0%)

Biology. RNA-binding protein, which is essential for gametogenesis in both males and females. Plays a central role during spermatogenesis. Acts by binding to the 3'-UTR of mRNA, specifically recognizing GUU triplets, and thereby regulating the translation of key transcripts (By similarity)

Curated tissue note. Testis specific

Reconsideration. Review gene-specific mapping and reliable protein evidence in naive B cells.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q92904 | HPA portal (live; not the pinned values)

DBX1 | Neither / Antibody

ENSG00000109851

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.2 nTPM; lymph node/t-cells; hpa_single_cell_tissue; vital; 0.9702 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Colon Adenocarcinoma (validation): 1/486 (0.2%)

Cancer IHC. prostate cancer: 10/10 (100.0%); lymphoma: 5/12 (41.7%)

Biology. Could have a role in patterning the central nervous system during embryogenesis. Has a key role in regulating the distinct phenotypic features that distinguish two major classes of ventral interneurons, V0 and V1 neurons. Regulates the transcription factor profile, neurotransmitter phenotype, intraspinal migratory path and axonal trajectory of V0 neurons, features that differentiate them from an adjacent set of V1 neurons (By ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NMT0 | HPA portal (live; not the pinned values)

DCAF4L2 | Neither / Antibody

ENSG00000176566

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.7 nTPM; skin/smooth muscle cells; hpa_single_cell_tissue; manageable; 0.09159 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 72/133 (54.1%); Liver Hepatocellular Carcinoma (validation): 59/231 (25.5%); Liver Hepatocellular Carcinoma (TCGA): 77/362 (21.3%)

Cancer IHC. prostate cancer: 9/9 (100.0%); pancreatic cancer: 7/9 (77.8%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NA75 | HPA portal (live; not the pinned values)

DCDC2C | Neither / Antibody

ENSG00000214866

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 23.6 nTPM; unsited/Lymphatic endothelial cells; hpa_single_cell; unresolved; 0.9 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Kidney Renal Clear Cell Carcinoma (validation): 1/100 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. prostate cancer: 10/10 (100.0%); liver cancer: 7/11 (63.6%)

Biology. Expressed in testis and spermatozoa (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A8MYV0 | HPA portal (live; not the pinned values)

DEFB104A | Neither / Screening

ENSG00000176782

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 3.1 nTPM; unsited/Distal tubular cells; hpa_single_cell; unresolved; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Ovary Serous Cystadenocarcinoma (TCGA): 3/349 (0.9%); Head and Neck Squamous Cell Carcinoma (TCGA): 4/492 (0.8%)

Cancer IHC. melanoma: 2/10 (20.0%); breast cancer: 0/10 (0.0%)

Biology. Has antimicrobial activity. Synergistic effects with lysozyme and DEFB103

Curated tissue note. High expression in the testis. Gastric antrum exhibited relatively high levels. A lower expression is observed in uterus and neutrophils thyroid gland, lung, and kidney. No detectable expression in other ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8WTQ1 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DEFB104B | Neither / Unassessed

ENSG00000177023

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.6 nTPM; esophagus/squamous epithelial cells; hpa_single_cell_tissue; protected; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Head and Neck Squamous Cell Carcinoma (TCGA): 1/492 (0.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. melanoma: 2/10 (20.0%); breast cancer: 0/10 (0.0%)

Biology. Has antimicrobial activity. Synergistic effects with lysozyme and DEFB103

Curated tissue note. High expression in the testis. Gastric antrum exhibited relatively high levels. A lower expression is observed in uterus and neutrophils thyroid gland, lung, and kidney. No detectable expression in other ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8WTQ1 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DEFB105A | Neither / Screening

ENSG00000186562

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 6.241 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 5.067 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (validation): 1/81 (1.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Has antibacterial activity

Curated tissue note. Specifically expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NG35 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DEFB105B | Neither / Screening

ENSG00000186599

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (TCGA): 1/349 (0.3%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Has antibacterial activity

Curated tissue note. Specifically expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NG35 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DEFB106A | Neither / Screening

ENSG00000186579

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.1 nTPM; esophagus/bulk; hpa_rna_consensus; protected; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. cervical cancer: 1/12 (8.3%); breast cancer: 0/9 (0.0%)

Biology. Has antibacterial activity (PubMed:12600824). Acts as a ligand for C-C chemokine receptor CCR2 (PubMed:23938203)

Curated tissue note. Expressed specifically in epididymis and lung

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N104 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DEFB106B | Neither / Screening

ENSG00000187082

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.0562 nTPM; blood/classical monocyte; hpa_immune_cell_samples; vital; 0.054 TPM; blood/classical monocyte; hpa_immune_cell_samples; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. cervical cancer: 1/12 (8.3%); breast cancer: 0/9 (0.0%)

Biology. Has antibacterial activity (PubMed:12600824). Acts as a ligand for C-C chemokine receptor CCR2 (PubMed:23938203)

Curated tissue note. Expressed specifically in epididymis and lung

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N104 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DEFB107A | Neither / Screening

ENSG00000186572

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.2 nTPM; tongue/suprabasal keratinocytes; hpa_single_cell_tissue; protected; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. prostate cancer: 2/11 (18.2%); colorectal cancer: 1/12 (8.3%)

Biology. Has antibacterial activity

Curated tissue note. Specifically expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IZN7 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DEFB107B | Neither / Screening

ENSG00000198129

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.2 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Squamous Cell Carcinoma (TCGA): 1/489 (0.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. prostate cancer: 2/11 (18.2%); colorectal cancer: 1/12 (8.3%)

Biology. Has antibacterial activity

Curated tissue note. Specifically expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IZN7 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DEFB110 | Neither / Screening

ENSG00000203970

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.2 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (TCGA): 1/141 (0.7%); Stomach Adenocarcinoma (TCGA): 2/346 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Has antibacterial activity

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q30KQ9 | HPA portal (live; not the pinned values)

DEFB112 | Neither / Unassessed

ENSG00000180872

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 1.4 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

DEFB114 | Neither / Screening

ENSG00000177684

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Has a salt-sensitive antimicrobial activity against Gram-negative bacteria, including E.coli, Gram-positive, including S.aureus, and fungi, including C.albicans. Binds to and neutralizes bacterial lipopolysaccharides (LPS), abolishing TNF production by macrophages challenged with LPS. Rescues the LPS-induced reduction of sperm motility in vitro and may protect from LPS-induced lethality

Curated tissue note. Expressed in epididymis, predominantly in the caput (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q30KQ6 | HPA portal (live; not the pinned values)

DEFB118 | Neither / Screening

ENSG00000131068

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1 nTPM; heart muscle/cardiomyocytes; hpa_single_cell_tissue; vital; 0.2331 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%); Head and Neck Squamous Cell Carcinoma (TCGA): 1/492 (0.2%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. Host defense peptide that exhibits antimicrobial activity against both Gram-negative bacteria, such as E.coli and S.typhimurium, and Gram-positive bacteria, such as S.aureus and B.subtilis (PubMed:15033915, PubMed:33224970). Inhibits cell adhesion of E.coli on intestinal epithelial enterocytes (PubMed:33224970). Causes rapid permeabilization of both the outer and inner membrane of E.coli, leading to morphological alterations on the ... [full text in table]

Curated tissue note. High-level and epididymis-specific expression (PubMed:12600824). Most abundant in the epithelium of the caput and present in the epididymis lumen and bound to sperm (PubMed:12600824). Also expressed in ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96PH6 | HPA portal (live; not the pinned values)

DEFB121 | Neither / Screening

ENSG00000204548

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.3 nTPM; unsited/Astrocytes; hpa_single_cell; unresolved; 0.1 TPM; blood/total PBMC; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. Has antibacterial activity

Curated tissue note. Abundant expression in the male reproductive tract only

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5J5C9 | HPA portal (live; not the pinned values)

DEFB125 | Neither / Low

ENSG00000178591

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 1.142 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Kidney Renal Papillary Cell Carcinoma (TCGA): 2/282 (0.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Clear Cell Carcinoma (TCGA): 1/521 (0.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Has antibacterial activity

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N687 | HPA portal (live; not the pinned values)

DEFB127 | Neither / Screening

ENSG00000088782

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 4.8 nTPM; skin/granulocytes; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Has antibacterial activity

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H1M4 | HPA portal (live; not the pinned values)

DEFB128 | Neither / Screening

ENSG00000185982

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 1.28 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Has antibacterial activity

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7Z7B8 | HPA portal (live; not the pinned values)

DEFB129 | Neither / Screening

ENSG00000125903

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 1.584 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Ovary Serous Cystadenocarcinoma (TCGA): 1/349 (0.3%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. pancreatic cancer: 2/12 (16.7%); breast cancer: 0/11 (0.0%)

Biology. Has antibacterial activity

Curated tissue note. Expressed specifically in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H1M3 | HPA portal (live; not the pinned values)

DEFB130A | Neither / Low

ENSG00000232948

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1505 nTPM; blood/naive CD4 T-cell; hpa_immune_cell_samples; vital; 1.3 TPM; blood/Memory CD4 T-cell Th1/Th17; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Antimicrobial host-defense peptide. Has an antiplasmodial activity

Curated tissue note. Expressed on differentiated macrophage phagocytizing plasmodium falciparum-parasitized erythrocytes

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DP73 | UniProt P0DP74 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DEFB130B | Neither / Low

ENSG00000233050

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1505 nTPM; blood/naive CD4 T-cell; hpa_immune_cell_samples; vital; 1.3 TPM; blood/Memory CD4 T-cell Th1/Th17; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Antimicrobial host-defense peptide. Has an antiplasmodial activity

Curated tissue note. Expressed on differentiated macrophage phagocytizing plasmodium falciparum-parasitized erythrocytes

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DP73 | UniProt P0DP74 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DEFB135 | Neither / Screening

ENSG00000205883

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.4 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.219 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Stomach Adenocarcinoma (TCGA): 1/346 (0.3%); Ovary Serous Cystadenocarcinoma (TCGA): 1/349 (0.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Has antibacterial activity

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q30KP9 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DMBX1 | Neither / Low

ENSG00000197587

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 4.6 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 1.306 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 34/176 (19.3%); Bladder Urothelial Carcinoma (TCGA): 30/169 (17.8%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 38/283 (13.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Functions as a transcriptional repressor. May repress OTX2-mediated transactivation by forming a heterodimer with OTX2 on the P3C (5'-TAATCCGATTA-3') sequence. Required for brain development (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NFW5 | HPA portal (live; not the pinned values)

DMRTC2 | Neither / Antibody

ENSG00000142025

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.8 nTPM; fallopian tube/neutrophils; hpa_single_cell_tissue; vital; 0.8937 TPM; blood/M2; dice_m2; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 2/50 (4.0%); Lung Adenocarcinoma (TCGA): 8/497 (1.6%); Kidney Chromophobe (TCGA): 1/64 (1.6%)

Cancer IHC. prostate cancer: 9/10 (90.0%); colorectal cancer: 4/11 (36.4%)

Biology. May be involved in sexual development

Curated tissue note. Expressed in testis and pancreas

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IXT2 | HPA portal (live; not the pinned values)

DNAH8 | Neither / Antibody

ENSG00000124721

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 14.3 nTPM; thymus/t-cells; hpa_single_cell_tissue; vital; 9.7 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Prostate Adenocarcinoma (TCGA): 119/480 (24.8%); Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Rectum Adenocarcinoma (validation): 2/207 (1.0%)

Cancer IHC. colorectal cancer: 12/12 (100.0%); endometrial cancer: 12/12 (100.0%)

Biology. Force generating protein component of the outer dynein arms (ODAs) in the sperm flagellum (PubMed:32619401). Produces force towards the minus ends of microtubules (PubMed:32619401). Key component of dynein, a family of motor proteins essential for movement along microtubules (By similarity). Dynein has ATPase activity; the force-producing power stroke is thought to occur on release of ADP (PubMed:32619401). Involved in sperm motility; ... [full text in table]

Curated tissue note. Expressed in spermatozoa (at protein level). Not detected in airway epithelial cells (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96JB1 | HPA portal (live; not the pinned values)

DPEP3 | Neither / Cellular

ENSG00000141096

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 12.35 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 22.1 TPM; blood/neutrophil; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 63/133 (47.4%); Ovary Serous Cystadenocarcinoma (TCGA): 94/349 (26.9%); Ovary Serous Cystadenocarcinoma (validation): 16/81 (19.8%)

Cancer IHC. testis cancer: 1/12 (8.3%); breast cancer: 0/12 (0.0%)

Biology. Lacks dipeptidase activity and is unable to hydrolyze cystinyl-bis-glycine, leukotriene D4 and the beta-lactam antibiotic imipenem (PubMed:32325220). The absence of activity may be due to the inability of asparagine (instead of aspartate found in DPEP1/2) at position 359 to function as the acid/base catalyst and activate the nucleophilic water/hydroxide (PubMed:32325220). A tyrosine (instead of histidine) at position 269 reduces ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H4B8 | HPA portal (live; not the pinned values)

DPPA2 | Neither / Antibody

ENSG00000163530

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.9 nTPM; kidney/proximal tubular cells; hpa_single_cell_tissue; vital; 1.259 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 105/133 (78.9%); Uterine Corpus Endometrial Carcinoma (TCGA): 12/176 (6.8%); Lung Squamous Cell Carcinoma (validation): 4/68 (5.9%)

Cancer IHC. breast cancer: 12/12 (100.0%); liver cancer: 12/12 (100.0%)

Biology. Binds to target gene promoters, including NKX2-5 and SYCE1, but not GATA4, and may be involved in the maintenance of the active epigenetic status of these genes

Curated tissue note. Expressed in embryonic stem cells. No expression is seen in 5 months embryo, mesenchymal stem cells, embryonic fibrocytes and adult tissues

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7Z7J5 | HPA portal (live; not the pinned values)

DPPA3 | Neither / Low

ENSG00000187569

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.7 nTPM; unsited/Lymphatic endothelial cells; hpa_single_cell; unresolved; 4 TPM; blood/plasmacytoid DC; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 122/133 (91.7%); Stomach Adenocarcinoma (TCGA): 8/346 (2.3%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Primordial germ cell (PGCs)-specific protein involved in epigenetic chromatin reprogramming in the zygote following fertilization (PubMed:35314832). In zygotes, DNA demethylation occurs selectively in the paternal pronucleus before the first cell division, while the adjacent maternal pronucleus and certain paternally-imprinted loci are protected from this process (By similarity). Participates in protection of DNA methylation in the ... [full text in table]

Curated tissue note. Low expression in testis, ovary and thymus. Expressed in embryonic stem and carcinoma cells. Highly expressed in testicular germ cell tumors

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6W0C5 | HPA portal (live; not the pinned values)

DPPA5 | Neither / Antibody

ENSG00000203909

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 5.2 nTPM; ovary/mixed immune cells; hpa_single_cell_tissue; vital; 2.068 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 112/133 (84.2%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Ovary Serous Cystadenocarcinoma (TCGA): 4/349 (1.1%)

Cancer IHC. skin cancer: 5/8 (62.5%); glioma: 7/12 (58.3%)

Biology. Involved in the maintenance of embryonic stem (ES) cell pluripotency. Dispensable for self-renewal of pluripotent ES cells and establishment of germ cells. Associates with specific target mRNAs (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NC42 | HPA portal (live; not the pinned values)

DUX4 | Neither / Low

ENSG00000260596

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.3 nTPM; duodenum/bulk; hpa_rna_consensus; vital; 0.5035 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Breast Invasive Carcinoma (TCGA): 25/1022 (2.4%); Stomach Adenocarcinoma (TCGA): 7/346 (2.0%); Uterine Corpus Endometrial Carcinoma (TCGA): 3/176 (1.7%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Transcription factor that is selectively and transiently expressed in cleavage-stage embryos (PubMed:28459457). Binds to double-stranded DNA elements with the consensus sequence 5'-TAATCTAATCA-3' (PubMed:28459454, PubMed:28459457, PubMed:29572508, PubMed:30315230, PubMed:30540931). Binds to chromatin containing histone H3 acetylated at 'Lys-27' (H3K27ac) and promotes deacetylation of H3K27ac. In parallel, binds to chromatin that lacks ... [full text in table]

Curated tissue note. Isoform 1: Does not seem to be expressed in normal muscle, but is detected in muscle of individuals with FSHD, and also in testis (at protein level) (PubMed:17984056, PubMed:21060811). Isoform 1: Does not seem ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9UBX2 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

DYDC1 | Neither / Antibody

ENSG00000170788

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 22.9 nTPM; lung/ciliated cells; hpa_single_cell_tissue; vital; 4.624 TPM; blood/NK; dice_nk; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 21/176 (11.9%); Testicular Germ Cell Tumor (TCGA): 7/133 (5.3%); Kidney Chromophobe (TCGA): 3/64 (4.7%)

Cancer IHC. melanoma: 11/12 (91.7%); ovarian cancer: 11/12 (91.7%)

Biology. Functions as part of axonemal radial spoke complexes that play an important part in the motility of sperm and cilia (By similarity). Plays a crucial role during acrosome biogenesis (PubMed:19545932)

Curated tissue note. Brain and testis. Accumulates during late stage of spermiogenesis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8WWB3 | HPA portal (live; not the pinned values)

EBLN1 | Neither / Low

ENSG00000223601

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 2.232 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 3/1022 (0.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May act as an RNA-binding protein. Highly homologous to the bornavirus nucleocapsid N protein that binds viral RNA and oligomerizes (By similarity)

Curated tissue note. Expression detected by RT-PCR in a few cell lines, including OL, HEK293T and MOLT-4. Not observed in HeLa cells (PubMed:20054395)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0CF75 | HPA portal (live; not the pinned values)

EFCAB3 | Neither / Antibody

ENSG00000172421

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.8 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 3.381 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 10/176 (5.7%); Bladder Urothelial Carcinoma (TCGA): 7/169 (4.1%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 8/283 (2.8%)

Cancer IHC. ovarian cancer: 4/10 (40.0%); glioma: 2/11 (18.2%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N7B9 | HPA portal (live; not the pinned values)

EFCAB8 | Neither / Antibody

ENSG00000215529

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 7.3 nTPM; spleen/t-cells; hpa_single_cell_tissue; vital; 7.034 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (validation): 2/81 (2.5%); Stomach Adenocarcinoma (TCGA): 2/346 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. colorectal cancer: 12/12 (100.0%); pancreatic cancer: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A8MWE9 | HPA portal (live; not the pinned values)

ENTHD1 | Neither / Antibody

ENSG00000176177

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 19 nTPM; pbmc/platelets; hpa_single_cell_tissue; vital; 9.931 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 40/99 (40.4%); Glioblastoma Multiforme (validation): 1/58 (1.7%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. renal cancer: 9/10 (90.0%); prostate cancer: 10/12 (83.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IYW4 | HPA portal (live; not the pinned values)

EPPIN-WFDC6 | Neither / Screening

ENSG00000249139

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.4 nTPM; lung/ciliated cells; hpa_single_cell_tissue; vital; 0.2079 TPM; blood/M2; dice_m2; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 5/133 (3.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. Serine protease inhibitor that plays an essential role in male reproduction and fertility. Modulates the hydrolysis of SEMG1 by KLK3/PSA (a serine protease), provides antimicrobial protection for spermatozoa in the ejaculate coagulum, and binds SEMG1 thereby inhibiting sperm motility

Curated tissue note. In testis, expressed and secreted by Sertoli cells, appearing on the surface of testicular and ejaculate spermatozoa. Expressed in the spermatogonia and the earliest preleptotene spermatocytes. In the ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O95925 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

ERICH6 | Neither / Cellular

ENSG00000163645

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 7.995 nTPM; blood/naive B-cell; hpa_immune_cell_samples; vital; 7.822 TPM; blood/MAIT T-cell; hpa_immune_cell_samples; vital

Cancer RNA. Kidney Renal Papillary Cell Carcinoma (TCGA): 16/282 (5.7%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 9/283 (3.2%); Skin Cuteneous Melanoma (TCGA): 2/99 (2.0%)

Cancer IHC. testis cancer: 2/12 (16.7%); lung cancer: 1/12 (8.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7L0X2 | HPA portal (live; not the pinned values)

ERICH6B | Neither / Antibody

ENSG00000165837

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.9 nTPM; pancreas/mixed immune cells; hpa_single_cell_tissue; vital; 2.218 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. testis cancer: 9/11 (81.8%); urothelial cancer: 8/10 (80.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5W0A0 | HPA portal (live; not the pinned values)

ERVH48-1 | Neither / Cellular

ENSG00000233056

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 10.64 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 9.535 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 109/133 (82.0%); Prostate Adenocarcinoma (TCGA): 114/480 (23.8%); Rectum Adenocarcinoma (validation): 32/207 (15.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in trophoblasts syncytialization, the spontaneous fusion of their plasma membranes, an essential process in placental development. May negatively regulate cell-cell fusion by interacting with SLC1A5, the probable receptor on the cell surface of the fusogenic syncytin-1/ERVW-1

Curated tissue note. Specifically expressed in placenta by extravillous trophoblasts and syncytiotrophoblasts (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt M5A8F1 | HPA portal (live; not the pinned values)

ETDB | Neither / Screening

ENSG00000224107

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.5 nTPM; unsited/Ciliated cells; hpa_single_cell; unresolved; 4.823 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Prostate Adenocarcinoma (TCGA): 1/480 (0.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DPP9 | UniProt Q3ZM63 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

EVX2 | Neither / Antibody

ENSG00000174279

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 11.7 nTPM; rectum/enteroendocrine cells; hpa_single_cell_tissue; protected; 0.0079 TPM; blood/MAIT T-cell; hpa_immune_cell_samples; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Prostate Adenocarcinoma (TCGA): 1/480 (0.2%)

Cancer IHC. testis cancer: 11/11 (100.0%); stomach cancer: 10/10 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q03828 | HPA portal (live; not the pinned values)

FAM170B | Neither / Antibody

ENSG00000172538

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 6.029 nTPM; blood/eosinophil; hpa_immune_cell_samples; vital; 5.133 TPM; blood/eosinophil; hpa_immune_cell_samples; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%)

Cancer IHC. breast cancer: 12/12 (100.0%); colorectal cancer: 12/12 (100.0%)

Biology. Plays a role in fertilization through the acrosome reaction

Curated tissue note. Exclusively expressed in adult testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NMN3 | HPA portal (live; not the pinned values)

FAM186A | Neither / Antibody

ENSG00000185958

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.9 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.547 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 11/176 (6.2%); Kidney Renal Papillary Cell Carcinoma (TCGA): 4/282 (1.4%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. cervical cancer: 12/12 (100.0%); endometrial cancer: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NE01 | HPA portal (live; not the pinned values)

FAM186B | Neither / Antibody

ENSG00000135436

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 4.2 nTPM; tongue/basal keratinocytes; hpa_single_cell_tissue; protected; 4.4 TPM; blood/naive CD8 T-cell; hpa_immune_monaco; vital

Cancer RNA. Kidney Chromophobe (TCGA): 7/64 (10.9%); Testicular Germ Cell Tumor (TCGA): 10/133 (7.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 16/282 (5.7%)

Cancer IHC. endometrial cancer: 6/12 (50.0%); liver cancer: 6/12 (50.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IYM0 | HPA portal (live; not the pinned values)

FAM217A | Neither / Antibody

ENSG00000145975

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.1 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 8.572 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. pancreatic cancer: 8/11 (72.7%); cervical cancer: 8/12 (66.7%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IXS0 | HPA portal (live; not the pinned values)

FAM236A | Neither / Screening

ENSG00000275520

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.9 nTPM; lymph node/bulk; hpa_rna_consensus; protected; 1 TPM; blood/Memory CD4 T-cell Th17; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 11/133 (8.3%); Ovary Serous Cystadenocarcinoma (TCGA): 1/349 (0.3%); Lung Squamous Cell Carcinoma (TCGA): 1/489 (0.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GUQ0 | UniProt A0A1B0GV22 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

FAM236B | Neither / Screening

ENSG00000268994

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.2 nTPM; retina/bulk; hpa_rna_consensus; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 3/133 (2.3%); Colon Adenocarcinoma (validation): 5/486 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GUQ0 | UniProt A0A1B0GV22 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

FAM236C | Neither / Low

ENSG00000283594

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.093 nTPM; blood/eosinophil; hpa_immune_cell_samples; vital; 0.9311 TPM; blood/eosinophil; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Ovary Serous Cystadenocarcinoma (TCGA): 1/349 (0.3%); Head and Neck Squamous Cell Carcinoma (TCGA): 1/492 (0.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GTK5 | UniProt P0DP71 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

FAM47A | Neither / Antibody

ENSG00000185448

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. skin cancer: 12/12 (100.0%); endometrial cancer: 11/11 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5JRC9 | HPA portal (live; not the pinned values)

FAM47B | Neither / Antibody

ENSG00000189132

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.2 nTPM; colon/distal enterocytes; hpa_single_cell_tissue; protected; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. cervical cancer: 12/12 (100.0%); endometrial cancer: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NA70 | HPA portal (live; not the pinned values)

FAM47C | Neither / Low

ENSG00000198173

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; pituitary gland/bulk; hpa_rna_consensus; vital; 0.1556 TPM; blood/TH17; dice_th17; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5HY64 | HPA portal (live; not the pinned values)

FAM9A | Neither / Antibody

ENSG00000183304

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.8 nTPM; retina/bulk; hpa_rna_consensus; vital; 0.3544 TPM; blood/eosinophil; hpa_immune_cell_samples; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 5/231 (2.2%); Rectum Adenocarcinoma (validation): 2/207 (1.0%); Stomach Adenocarcinoma (TCGA): 3/346 (0.9%)

Cancer IHC. testis cancer: 2/11 (18.2%); colorectal cancer: 2/12 (16.7%)

Biology. Expressed exclusively in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IZU1 | HPA portal (live; not the pinned values)

FANCD2OS | Neither / Cellular

ENSG00000163705

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 7.423 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 5.285 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 4/133 (3.0%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Reduces testosterone levels by inhibiting steroidogenic enzymes and by promoting apoptosis in Leydig cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96PS1 | HPA portal (live; not the pinned values)

FBXO43 | Neither / Antibody

ENSG00000156509

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 19.6 nTPM; adipose tissue/t-cells; hpa_single_cell_tissue; vital; 2.515 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 12/50 (24.0%); Glioblastoma Multiforme (validation): 4/58 (6.9%); Liver Hepatocellular Carcinoma (validation): 6/231 (2.6%)

Cancer IHC. ovarian cancer: 2/11 (18.2%); liver cancer: 1/12 (8.3%)

Biology. Required to establish and maintain the arrest of oocytes at the second meiotic metaphase until fertilization. Acts by inhibiting the anaphase-promoting complex/cyclosome (APC/C) ubiquitin ligase. Probably recognizes and binds to some phosphorylated proteins and promotes their ubiquitination and degradation (PubMed:34052850, PubMed:34595750). Plays a vital role in modulating the ubiquitilation of CCNB1 and CDK1 during gametogenesis

Curated tissue note. Expressed in the testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q4G163 | HPA portal (live; not the pinned values)

FBXO47 | Neither / Antibody

ENSG00000204952

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.7 nTPM; stomach/plasma cells; hpa_single_cell_tissue; vital; 0.8696 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (TCGA): 1/88 (1.1%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Colon Adenocarcinoma (validation): 1/486 (0.2%)

Cancer IHC. pancreatic cancer: 1/11 (9.1%); breast cancer: 1/12 (8.3%)

Biology. Probably recognizes and binds to some phosphorylated proteins and promotes their ubiquitination and degradation

Curated tissue note. Widely expressed, with highest levels in kidney, liver and pancreas. Down-regulated in tumors

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5MNV8 | HPA portal (live; not the pinned values)

FGF4 | Neither / Antibody

ENSG00000075388

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1 nTPM; vascular/schwann cells; hpa_single_cell_tissue; vital; 0.2 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 48/133 (36.1%); Uterine Corpus Endometrial Carcinoma (TCGA): 5/176 (2.8%); Bladder Urothelial Carcinoma (TCGA): 4/169 (2.4%)

Cancer IHC. liver cancer: 3/10 (30.0%); endometrial cancer: 3/12 (25.0%)

Biology. Plays an important role in the regulation of embryonic development, cell proliferation, and cell differentiation. Required for normal limb and cardiac valve development during embryogenesis. May play a role in embryonic molar tooth bud development via inducing the expression of MSX1, MSX2 and MSX1-mediated expression of SDC1 in dental mesenchyme cells (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P08620 | HPA portal (live; not the pinned values)

FNDC7 | Neither / Selectivity

ENSG00000143107

Decision. Insufficient reproductive enrichment; selectivity alone is not proof of unsafe targeting.

Boundary. Failed bulk numeric comparisons are within 20% of their cutoffs; not an automatic rescue

Normal RNA / IHC. 3.3 nTPM; unsited/Oligodendrocyte precursor cells; hpa_single_cell; unresolved; 2.869 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 6/58 (10.3%); Glioblastoma Multiforme (TCGA): 2/141 (1.4%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. melanoma: 1/12 (8.3%); ovarian cancer: 1/12 (8.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5VTL7 | HPA portal (live; not the pinned values)

FOXE3 | Neither / Low

ENSG00000186790

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.6 nTPM; colon/undifferentiated cells; hpa_single_cell_tissue; protected; 0.737 TPM; blood/NK; dice_nk; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 21/133 (15.8%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 23/283 (8.1%); Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Transcription factor that controls lens epithelial cell growth through regulation of proliferation, apoptosis and cell cycle (PubMed:22527307, PubMed:25504734). During lens development, controls the ratio of the lens fiber cells to the cells of the anterior lens epithelium by regulating the rate of proliferation and differentiation (By similarity). Controls lens vesicle closure and subsequent separation of the lens vesicle from ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q13461 | HPA portal (live; not the pinned values)

FOXL3 | Neither / Low

ENSG00000248767

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 10.4 nTPM; small intestine/paneth cells; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Pancreatic Adenocarcinoma (TCGA): 1/176 (0.6%); Lung Squamous Cell Carcinoma (TCGA): 1/489 (0.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Probable transcriptional regulator

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1W2PRP0 | HPA portal (live; not the pinned values)

FOXN4 | Neither / Antibody

ENSG00000139445

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 11.5 nTPM; bronchus/ciliated cells; hpa_single_cell_tissue; vital; 0.5291 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 31/176 (17.6%); Liver Hepatocellular Carcinoma (validation): 33/231 (14.3%); Breast Invasive Carcinoma (validation): 6/50 (12.0%)

Cancer IHC. pancreatic cancer: 6/10 (60.0%); stomach cancer: 4/10 (40.0%)

Biology. Transcription factor essential for neural and some non-neural tissues development, such as retina and lung respectively. Binds to an 11-bp consensus sequence containing the invariant tetranucleotide 5'-ACGC-3'. During development of the central nervous system, is required to specify the amacrine and horizontal cell fates from multipotent retinal progenitors while suppressing the alternative photoreceptor cell fates through activating ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96NZ1 | HPA portal (live; not the pinned values)

FOXR1 | Neither / Low

ENSG00000176302

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 4.5 nTPM; vascular/macrophages; hpa_single_cell_tissue; vital; 1.652 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 24/133 (18.0%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Transcription factor which acts as both an activator and a repressor (PubMed:34723967). Activates transcription of a number of genes including the heat shock chaperones HSPA1A and HSPA6 and the antioxidant NADPH-dependent reductase DHRS2 which are involved in protection against oxidative stress (PubMed:34723967). Required for normal brain development (By similarity)

Curated tissue note. Expressed in testis (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6PIV2 | HPA portal (live; not the pinned values)

FOXR2 | Neither / Antibody

ENSG00000189299

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.5127 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 8/133 (6.0%); Skin Cuteneous Melanoma (TCGA): 2/99 (2.0%); Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%)

Cancer IHC. melanoma: 3/8 (37.5%); endometrial cancer: 4/11 (36.4%)

Biology. Expressed in breast cancer cell lines and primary cancer

Reconsideration. Resolve discordance between HPA034487 and HPA057358 using independently validated protein evidence.

Therapeutic evidence. Cancer mechanism.

UniProt Q6PJQ5 | Reviewed source 1 | HPA portal (live; not the pinned values)

FTHL17 | Neither / Low

ENSG00000132446

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 39/133 (29.3%); Lung Squamous Cell Carcinoma (TCGA): 30/489 (6.1%); Bladder Urothelial Carcinoma (TCGA): 10/169 (5.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Testis specific. Also expressed in several cancers

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9BXU8 | HPA portal (live; not the pinned values)

FUT5 | Neither / Antibody

ENSG00000130383

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.7 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 1.038 TPM; blood/TH17; dice_th17; vital

Cancer RNA. Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 2/283 (0.7%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. colorectal cancer: 5/12 (41.7%); urothelial cancer: 4/10 (40.0%)

Biology. Catalyzes preferentially the transfer of L-fucose, from a guanosine diphosphate-beta-L-fucose, to the N-acetyl-beta-D-glucosamine (GlcNAc) of an N-acetyllactosamine unit (type 2 chain) of an oligosaccharide, or a glycoprotein- and a glycolipid-linked N-acetyllactosamine unit via an alpha (1,3) linkage and participates in the surface expression of VIM-2, Lewis X/SSEA-1 and sialyl Lewis X antigens (PubMed:14718375, PubMed:1740457, ... [full text in table]

Curated tissue note. Liver, colon and testis and trace amounts in T-cells and brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q11128 | HPA portal (live; not the pinned values)

GAB4 | Neither / Antibody

ENSG00000215568

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1 nTPM; vascular/schwann cells; hpa_single_cell_tissue; vital; 0.1 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 3/176 (1.7%); Ovary Serous Cystadenocarcinoma (validation): 1/81 (1.2%); Lung Adenocarcinoma (validation): 1/105 (1.0%)

Cancer IHC. colorectal cancer: 6/10 (60.0%); melanoma: 6/12 (50.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q2WGN9 | HPA portal (live; not the pinned values)

GAGE10 | Neither / Selectivity

ENSG00000215274

Decision. Insufficient reproductive enrichment; selectivity alone is not proof of unsafe targeting.

Normal RNA / IHC. 1.6 nTPM; skin/fibroblasts; hpa_single_cell_tissue; manageable; 5.178 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Lung Squamous Cell Carcinoma (TCGA): 36/489 (7.4%); Skin Cuteneous Melanoma (TCGA): 7/99 (7.1%); Liver Hepatocellular Carcinoma (TCGA): 19/362 (5.2%)

Cancer IHC. breast cancer: 0/10 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NGK3 | HPA portal (live; not the pinned values)

GDPD4 | Neither / Low

ENSG00000178795

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.7 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.334 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 20/133 (15.0%); Liver Hepatocellular Carcinoma (validation): 10/231 (4.3%); Pancreatic Adenocarcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Ecto-phospholipase that cleaves the phosphodiester bond in the glycosylphosphatidylinositol (GPI) anchor of TRABD2A and TRABD2B, releasing them from the plasma membrane. The release in the extracellular space inactivates these metalloproteases involved in the negative regulation of Wnt signaling

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6W3E5 | HPA portal (live; not the pinned values)

GFY | Neither / Low

ENSG00000261949

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 3.1 nTPM; pbmc/b-cells; hpa_single_cell_tissue; vital; 0.3602 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 11/133 (8.3%); Uterine Corpus Endometrial Carcinoma (TCGA): 9/176 (5.1%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 14/283 (4.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Required for proper function of the olfactory system. May be involved in establishing the acuity of olfactory sensory signaling (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt I3L273 | HPA portal (live; not the pinned values)

GJA10 | Neither / Antibody

ENSG00000135355

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 16.4 nTPM; unsited/Horizontal cells; hpa_single_cell; unresolved; 0.6299 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 9/133 (6.8%); Liver Hepatocellular Carcinoma (validation): 6/231 (2.6%); Liver Hepatocellular Carcinoma (TCGA): 1/362 (0.3%)

Cancer IHC. testis cancer: 9/11 (81.8%); glioma: 7/12 (58.3%)

Biology. One gap junction consists of a cluster of closely packed pairs of transmembrane channels, the connexons, through which materials of low MW diffuse from one cell to a neighboring cell. Involved in tracer coupling between horizontal cells of the retina. May play a role in the regulation of horizontal cell patterning (By similarity)

Curated tissue note. Expressed in skeletal muscle and heart

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q969M2 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

GK2 | Neither / Antibody

ENSG00000196475

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.0523 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. liver cancer: 8/11 (72.7%); endometrial cancer: 5/11 (45.5%)

Biology. Key enzyme in the regulation of glycerol uptake and metabolism. Essential for male fertility and sperm mitochondrial sheath formation (By similarity). Required for proper arrangement of crescent-like mitochondria to form the mitochondrial sheath during spermatogenesis (By similarity). Can induce mitochondrial clustering through interactions with PLD6 and up-regulation of phosphatidic acid synthesis in the mitochondria (PubMed:28852571)

Curated tissue note. Testis-specific (PubMed:33536340). Expressed in the midpiece of spermatozoa (PubMed:28852571)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q14410 | HPA portal (live; not the pinned values)

GK3 | Neither / Antibody

ENSG00000229894

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 5.9 nTPM; esophagus/b-cells; hpa_single_cell_tissue; vital; 2.222 TPM; blood/MONOCYTES; dice_monocytes; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 1/50 (2.0%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. liver cancer: 8/11 (72.7%); endometrial cancer: 5/11 (45.5%)

Biology. May be involved in the regulation of glycerol uptake and metabolism

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q14409 | HPA portal (live; not the pinned values)

GLT6D1 | Neither / Antibody

ENSG00000204007

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.7 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. urothelial cancer: 12/12 (100.0%); testis cancer: 10/10 (100.0%)

Biology. Expressed in both healthy and inflamed gingival tissue samples at similar levels, with higher expression in the gingival connective tissue compared to gingival epithelium. Strongest expression in testis, followed by leukocytes

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7Z4J2 | HPA portal (live; not the pinned values)

GOLGA6B | Neither / Selectivity

ENSG00000215186

Decision. Insufficient reproductive enrichment; selectivity alone is not proof of unsafe targeting.

Normal RNA / IHC. 4.2 nTPM; liver/bulk; hpa_rna_consensus; vital; 0.5489 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 1/50 (2.0%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. melanoma: 1/11 (9.1%); cervical cancer: 1/12 (8.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NDN3 | HPA portal (live; not the pinned values)

GOLGA6L1 | Neither / Antibody

ENSG00000273976

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.1 nTPM; eye/muller glia cells; hpa_single_cell_tissue; vital; 0.1 TPM; blood/Effector memory CD8 T-cell; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. melanoma: 2/10 (20.0%); skin cancer: 1/10 (10.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N7Z2 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

GOLGA6L22 | Neither / Antibody

ENSG00000277865

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.5 nTPM; bone marrow/plasma cells; hpa_single_cell_tissue; vital; 0.9057 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. melanoma: 2/10 (20.0%); skin cancer: 1/10 (10.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt H0YM25 | HPA portal (live; not the pinned values)

GOLGA6L6 | Neither / Antibody

ENSG00000277322

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 12 nTPM; esophagus/schwann cells; hpa_single_cell_tissue; protected; 0.1615 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. melanoma: 2/10 (20.0%); skin cancer: 1/10 (10.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A8MZA4 | HPA portal (live; not the pinned values)

GOLGA8F | Neither / Screening

ENSG00000153684

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.1 nTPM; basal ganglia/bulk; hpa_rna_consensus; vital; 0.1102 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DX52 | HPA portal (live; not the pinned values)

GOLGA8S | Neither / Cellular

ENSG00000261739

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 1.9 nTPM; heart muscle/cardiomyocytes; hpa_single_cell_tissue; vital; 26.5 TPM; blood/NK; dice_nk; vital

Cancer RNA. Kidney Renal Papillary Cell Carcinoma (TCGA): 2/282 (0.7%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt H3BPF8 | HPA portal (live; not the pinned values)

GOT1L1 | Neither / Antibody

ENSG00000169154

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.6485 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Lung Squamous Cell Carcinoma (validation): 1/68 (1.5%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%)

Cancer IHC. breast cancer: 12/12 (100.0%); colorectal cancer: 12/12 (100.0%)

Biology. Catalyzes the conversion of L-aspartate and 2-oxoglutarate to L-glutamate and oxaloacetate (PubMed:25287256). It has been proposed to exhibit aspartate racemase activity, but this function remains debated and lacks strong experimental support (PubMed:25287256)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NHS2 | HPA portal (live; not the pinned values)

GPHB5 | Neither / Low

ENSG00000179600

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 1.786 TPM; blood/NK; dice_nk; vital

Cancer RNA. Lung Squamous Cell Carcinoma (validation): 3/68 (4.4%); Lung Squamous Cell Carcinoma (TCGA): 6/489 (1.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Functions as a heterodimeric glycoprotein hormone with GPHA2 able to bind and activate the thyroid-stimulating hormone receptor (TSHR), leading to increased cAMP production. Plays a central role in controlling thyroid cell metabolism

Curated tissue note. Highly expressed in brain and at low levels in pituitary. Also found in retina, testis and skin but not in pancreas, parotid, kidney, stomach, liver, colon, small intestine, thyroid, brain or adrenal gland. In ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q86YW7 | HPA portal (live; not the pinned values)

GPR139 | Neither / Antibody

ENSG00000180269

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.2 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.1989 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Glioblastoma Multiforme (validation): 9/58 (15.5%); Breast Invasive Carcinoma (validation): 6/50 (12.0%); Breast Invasive Carcinoma (TCGA): 31/1022 (3.0%)

Cancer IHC. breast cancer: 12/12 (100.0%); cervical cancer: 12/12 (100.0%)

Biology. Orphan receptor. Seems to act through a G(q/11)-mediated pathway

Curated tissue note. Expressed almost exclusively in the brain. Detected at very low levels in the peripheral tissues

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6DWJ6 | HPA portal (live; not the pinned values)

GPR21 | Neither / Antibody

ENSG00000188394

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 8.4 nTPM; esophagus/smooth muscle cells; hpa_single_cell_tissue; protected; 7.2 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Glioblastoma Multiforme (validation): 23/58 (39.7%); Breast Invasive Carcinoma (validation): 2/50 (4.0%); Rectum Adenocarcinoma (validation): 7/207 (3.4%)

Cancer IHC. ovarian cancer: 12/12 (100.0%); cervical cancer: 11/12 (91.7%)

Biology. Orphan receptor

Curated tissue note. Not detected in the brain regions thalamus, putamen, caudate, frontal cortex, pons, hypothalamus, hippocampus

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q99679 | HPA portal (live; not the pinned values)

GPR31 | Neither / Antibody

ENSG00000120436

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 14.8 nTPM; adipose tissue/schwann cells; hpa_single_cell_tissue; manageable; 2.414 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 1/50 (2.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. cervical cancer: 10/12 (83.3%); colorectal cancer: 10/12 (83.3%)

Biology. High-affinity receptor for 12-(S)-hydroxy-5,8,10,14-eicosatetraenoic acid (12-S-HETE), with much lower affinities for other HETE isomers (PubMed:21712392, PubMed:29227475). 12-S-HETE is a eicosanoid, a 12-lipoxygenase (ALOX12) metabolite of arachidonic acid, involved in many physiologic and pathologic processes (PubMed:26965684, PubMed:28619714, PubMed:29227475). 12-S-HETE-binding leads to activation of ERK1/2 (MAPK3/MAPK1), MEK, and ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O00270 | HPA portal (live; not the pinned values)

GPX6 | Neither / Low

ENSG00000198704

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; skin/basal keratinocytes; hpa_single_cell_tissue; manageable; 0.3196 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Expressed in olfactory epithelium and embryos

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P59796 | HPA portal (live; not the pinned values)

GSC2 | Neither / Antibody

ENSG00000063515

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.4 nTPM; unsited/Cone photoreceptor cells; hpa_single_cell; unresolved; 0.6159 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 2/283 (0.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. cervical cancer: 12/12 (100.0%); melanoma: 12/12 (100.0%)

Biology. May have a role in development. May regulate its own transcription. May bind the bicoid consensus sequence TAATCC

Curated tissue note. Detected in adult testis and pituitary, and in 9-10 week fetal tissue (thorax). Probably expressed in other tissues at low levels

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O15499 | HPA portal (live; not the pinned values)

GSTT4 | Neither / Low

ENSG00000276950

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 3.4 nTPM; small intestine/enteroendocrine cells; hpa_single_cell_tissue; vital; 2.573 TPM; blood/NK; dice_nk; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Conjugation of reduced glutathione to a wide number of exogenous and endogenous hydrophobic electrophiles

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1W2PR19 | HPA portal (live; not the pinned values)

GTSF1L | Neither / Cellular

ENSG00000124196

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 12.4 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 17.53 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 3/133 (2.3%); Kidney Renal Papillary Cell Carcinoma (TCGA): 2/282 (0.7%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H1H1 | HPA portal (live; not the pinned values)

H1-6 | Neither / Screening

ENSG00000187475

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 5.2 nTPM; esophagus/plasma cells; hpa_single_cell_tissue; vital; 2.662 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Glioblastoma Multiforme (validation): 19/58 (32.8%); Pancreatic Adenocarcinoma (validation): 2/80 (2.5%); Rectum Adenocarcinoma (validation): 2/207 (1.0%)

Cancer IHC. testis cancer: 7/11 (63.6%); stomach cancer: 1/12 (8.3%)

Biology. Testis-specific histone H1 that forms less compacted chromatin compared to other H1 histone subtypes (PubMed:26757249). Formation of more relaxed chromatin may be required to promote chromatin architecture required for proper chromosome regulation during meiosis, such as homologous recombination (PubMed:26757249). Histones H1 act as linkers that bind to nucleosomes and compact polynucleosomes into a higher-order chromatin configuration ... [full text in table]

Curated tissue note. Testis-specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P22492 | HPA portal (live; not the pinned values)

H2AB3 | Neither / Screening

ENSG00000277745

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.4 nTPM; spleen/bulk; hpa_rna_consensus; manageable; 1.061 TPM; blood/NK; dice_nk; vital

Cancer RNA. Head and Neck Squamous Cell Carcinoma (TCGA): 9/492 (1.8%); Lung Squamous Cell Carcinoma (TCGA): 8/489 (1.6%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 4/283 (1.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Atypical histone H2A which can replace conventional H2A in some nucleosomes and is associated with active transcription and mRNA processing. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. Nucleosomes containing this histone are ... [full text in table]

Curated tissue note. Present in mature sperm

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0C5Z0 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

H2BC1 | Neither / Screening

ENSG00000146047

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. testis cancer: 6/12 (50.0%); liver cancer: 4/11 (36.4%)

Biology. Variant histone specifically required to direct the transformation of dissociating nucleosomes to protamine in male germ cells (By similarity). Entirely replaces classical histone H2B prior nucleosome to protamine transition and probably acts as a nucleosome dissociating factor that creates a more dynamic chromatin, facilitating the large-scale exchange of histones (By similarity). Core component of nucleosome (By similarity). ... [full text in table]

Curated tissue note. Mainly expressed in testis, and the corresponding protein is also present in mature sperm (at protein level). Also found in some fat cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96A08 | HPA portal (live; not the pinned values)

H2BW1 | Neither / Antibody

ENSG00000123569

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.1 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.066 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 3/169 (1.8%); Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Lung Squamous Cell Carcinoma (TCGA): 3/489 (0.6%)

Cancer IHC. breast cancer: 9/12 (75.0%); prostate cancer: 7/12 (58.3%)

Biology. Atypical histone H2B that can form nucleosomes structurally and dynamically indistinguishable from those containing conventional H2B. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex ... [full text in table]

Curated tissue note. Testis-specific (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7Z2G1 | HPA portal (live; not the pinned values)

H2BW2 | Neither / Low

ENSG00000101812

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.9 nTPM; thymus/bulk; hpa_rna_consensus; manageable; 3.914 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Glioblastoma Multiforme (TCGA): 5/141 (3.5%); Bladder Urothelial Carcinoma (TCGA): 4/169 (2.4%); Uterine Corpus Endometrial Carcinoma (TCGA): 3/176 (1.7%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Core component of nucleosome. Nucleosomes wrap and compact DNA into chromatin, limiting DNA accessibility to the cellular machineries which require DNA as a template. Histones thereby play a central role in transcription regulation, DNA repair, DNA replication and chromosomal stability. DNA accessibility is regulated via a complex set of post-translational modifications of histones, also called histone code, and nucleosome remodeling

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0C1H6 | HPA portal (live; not the pinned values)

HES3 | Neither / Antibody

ENSG00000173673

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.7 nTPM; thymus/bulk; hpa_rna_consensus; manageable; 0.8962 TPM; blood/NK; dice_nk; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 16/133 (12.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Adenocarcinoma (TCGA): 1/497 (0.2%)

Cancer IHC. stomach cancer: 6/11 (54.5%); breast cancer: 6/12 (50.0%)

Biology. Transcriptional repressor of genes that require a bHLH protein for their transcription

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5TGS1 | HPA portal (live; not the pinned values)

HIGD1C | Neither / Cellular

ENSG00000214511

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 6.6 nTPM; unsited/Oligodendrocyte precursor cells; hpa_single_cell; unresolved; 8.578 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A8MV81 | HPA portal (live; not the pinned values)

HIGD2B | Neither / Antibody

ENSG00000175202

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.5 nTPM; lymph node/b-cells; hpa_single_cell_tissue; vital; 0.8847 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. liver cancer: 3/11 (27.3%); renal cancer: 2/12 (16.7%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q4VC39 | HPA portal (live; not the pinned values)

HNRNPCL1 | Neither / Low

ENSG00000179172

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 4.2 nTPM; bronchus/smooth muscle cells; hpa_single_cell_tissue; vital; 1.377 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in nucleosome assembly by neutralizing basic proteins such as A and B core hnRNPs

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O60812 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

HNRNPCL2 | Neither / Low

ENSG00000275774

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; skeletal muscle/fibroblasts; hpa_single_cell_tissue; vital; 0.5164 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in nucleosome assembly by neutralizing basic proteins such as A and B core hnRNPs

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt B2RXH8 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

HNRNPCL4 | Neither / Low

ENSG00000179412

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1403 nTPM; blood/total PBMC; hpa_immune_cell_samples; vital; 0.135 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Liver Hepatocellular Carcinoma (TCGA): 1/362 (0.3%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt B7ZW38 | UniProt P0DMR1 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

HORMAD1 | Neither / Cellular

ENSG00000143452

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 14.8 nTPM; tongue/basal keratinocytes; hpa_single_cell_tissue; protected; 19.73 TPM; blood/MONOCYTES; dice_monocytes; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 76/133 (57.1%); Lung Squamous Cell Carcinoma (validation): 34/68 (50.0%); Lung Adenocarcinoma (validation): 41/105 (39.0%)

Cancer IHC. colorectal cancer: 2/10 (20.0%); testis cancer: 2/11 (18.2%)

Biology. Plays a key role in meiotic progression. Regulates 3 different functions during meiosis: ensures that sufficient numbers of processed DNA double-strand breaks (DSBs) are available for successful homology search by increasing the steady-state numbers of single-stranded DSB ends. Promotes synaptonemal-complex formation independently of its role in homology search. Plays a key role in the male mid-pachytene checkpoint and the female ... [full text in table]

Curated tissue note. Testis-specific. Over-expressed in carcinomas

Reconsideration. Review gene-specific read mapping and obtain reliable protein evidence in the implicated immune populations.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q86X24 | HPA portal (live; not the pinned values)

HSF5 | Neither / Cellular

ENSG00000176160

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 8.1 nTPM; lymph node/b-cells; hpa_single_cell_tissue; vital; 16.81 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. urothelial cancer: 1/11 (9.1%); ovarian cancer: 1/12 (8.3%)

Biology. DNA-binding transcription factor that is essential for male fertility, spermatogenesis and meiotic prophase progression in spermatocytes under non-stress conditions. Positvely and negatively regulates gene expression to ensure progression of meiotic prophase beyond pachytene stage in spermatocytes

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q4G112 | HPA portal (live; not the pinned values)

HSFX3 | Neither / Screening

ENSG00000283697

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.2 nTPM; adrenal gland/bulk; hpa_rna_consensus; vital; 2.327 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GWH4 | HPA portal (live; not the pinned values)

HSFY1 | Neither / Screening

ENSG00000172468

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.7 nTPM; hypothalamus/bulk; hpa_rna_consensus; vital; 0.3 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 10/169 (5.9%); Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Lung Adenocarcinoma (validation): 1/105 (1.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Testis-specific. Present in Sertoli cells and spermatogenic cells (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96LI6 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

HTRA4 | Neither / Cellular

ENSG00000169495

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 27.6 nTPM; lung/macrophages; hpa_single_cell_tissue; vital; 9.495 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 132/207 (63.8%); Colon Adenocarcinoma (validation): 303/486 (62.3%); Lung Adenocarcinoma (validation): 38/105 (36.2%)

Cancer IHC. prostate cancer: 2/11 (18.2%); renal cancer: 1/11 (9.1%)

Biology. Serine protease

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P83105 | HPA portal (live; not the pinned values)

IGBP1C | Neither / Antibody

ENSG00000266826

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 6.4 nTPM; esophagus/macrophages; hpa_single_cell_tissue; vital; 0.9841 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. breast cancer: 12/12 (100.0%); colorectal cancer: 9/9 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1W2PR95 | HPA portal (live; not the pinned values)

IL31 | Neither / Antibody

ENSG00000204671

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.6 nTPM; unsited/Horizontal cells; hpa_single_cell; unresolved; 16.24 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 2/231 (0.9%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Head and Neck Squamous Cell Carcinoma (TCGA): 1/492 (0.2%)

Cancer IHC. urothelial cancer: 3/12 (25.0%); breast cancer: 2/11 (18.2%)

Biology. Functions as a cytokine that binds to IL31RA, a membrane-bound signal-transducing subunit of the IL31 receptor complex (heterodimer composed of OSMR and IL31RA) (PubMed:15184896, PubMed:15627637). Functionally, IL31 signaling via OSMR/IL31RA is particularly important in skin immunity (PubMed:15184896). Mechanistically, ligand binding to IL31RA, induces heterodimerization with OSMR, activating JAK1 and JAK2 (and to a lesser extent TYK2) ... [full text in table]

Curated tissue note. Detected at low levels in testis, bone marrow, skeletal muscle, kidney, colon, thymus, small intestine and trachea

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6EBC2 | HPA portal (live; not the pinned values)

IQCA1L | Neither / Low

ENSG00000278685

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.7 nTPM; lymph node/b-cells; hpa_single_cell_tissue; vital; 2.763 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NCM1 | HPA portal (live; not the pinned values)

IQCJ | Neither / Antibody

ENSG00000214216

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.6 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.3427 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 1/50 (2.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 3/1022 (0.3%)

Cancer IHC. pancreatic cancer: 6/12 (50.0%); colorectal cancer: 5/12 (41.7%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q1A5X6 | HPA portal (live; not the pinned values)

IQCM | Neither / Cellular

ENSG00000234828

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 5.7 nTPM; colon/undifferentiated cells; hpa_single_cell_tissue; protected; 6.752 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Colon Adenocarcinoma (validation): 1/486 (0.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GVH7 | HPA portal (live; not the pinned values)

IZUMO2 | Neither / Antibody

ENSG00000161652

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 6.7 nTPM; rectum/enteroendocrine cells; hpa_single_cell_tissue; protected; 5.423 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 6/80 (7.5%); Rectum Adenocarcinoma (TCGA): 6/88 (6.8%); Rectum Adenocarcinoma (validation): 9/207 (4.3%)

Cancer IHC. pancreatic cancer: 7/9 (77.8%); prostate cancer: 9/12 (75.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6UXV1 | HPA portal (live; not the pinned values)

KCNA10 | Neither / Low

ENSG00000143105

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; thymus/bulk; hpa_rna_consensus; manageable; 0.3054 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Voltage-gated potassium ion channel that mediates K(+) permeability of excitable membranes. When opened in response to the voltage difference across the membrane, KCNA10 channel selectively allows the flow of potassium ions across the membrane down their electrochemical gradient

Curated tissue note. Detected in kidney, in proximal tubules, glomerular endothelium, in vascular endothelium and in smooth muscle cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q16322 | HPA portal (live; not the pinned values)

KIF4B | Neither / Antibody

ENSG00000226650

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.5 nTPM; bronchus/smooth muscle cells; hpa_single_cell_tissue; vital; 0.5057 TPM; blood/NK; dice_nk; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. prostate cancer: 12/12 (100.0%); breast cancer: 11/11 (100.0%)

Biology. Iron-sulfur (Fe-S) cluster binding motor protein that has a role in chromosome segregation during mitosis (By similarity). Translocates PRC1 to the plus ends of interdigitating spindle microtubules during the metaphase to anaphase transition, an essential step for the formation of an organized central spindle midzone and midbody and for successful cytokinesis (By similarity). May play a role in mitotic chromosomal positioning and ... [full text in table]

Curated tissue note. Specifically expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q2VIQ3 | HPA portal (live; not the pinned values)

KRT26 | Neither / Cellular

ENSG00000186393

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 5.7 nTPM; skin/bulk; hpa_rna_consensus; manageable; 9.3 TPM; blood/neutrophil; hpa_immune_monaco; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 3/283 (1.1%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/10 (0.0%)

Biology. Strongly expressed in skin and scalp, and weak expression observed in thymus and tongue. In the hair follicle, expression is restricted to the mid- to upper inner root sheath cuticle, being present slightly above the apex of the dermal papilla (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7Z3Y9 | HPA portal (live; not the pinned values)

KRTAP10-12 | Neither / Screening

ENSG00000189169

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 9.5 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0.2551 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. In the hair cortex, hair keratin intermediate filaments are embedded in an interfilamentous matrix, consisting of hair keratin-associated proteins (KRTAP), which are essential for the formation of a rigid and resistant hair shaft through their extensive disulfide bond cross-linking with abundant cysteine residues of hair keratins. The matrix proteins include the high-sulfur and high-glycine-tyrosine keratins

Curated tissue note. Restricted to a narrow region of the hair fiber cuticle, lying approximately 20 cell layers above the apex of the dermal papilla of the hair root; not detected in any other tissues

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P60413 | HPA portal (live; not the pinned values)

KRTAP10-6 | Neither / Low

ENSG00000188155

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.5 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0.2523 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. In the hair cortex, hair keratin intermediate filaments are embedded in an interfilamentous matrix, consisting of hair keratin-associated proteins (KRTAP), which are essential for the formation of a rigid and resistant hair shaft through their extensive disulfide bond cross-linking with abundant cysteine residues of hair keratins. The matrix proteins include the high-sulfur and high-glycine-tyrosine keratins

Curated tissue note. Restricted to a narrow region of the hair fiber cuticle, lying approximately 20 cell layers above the apex of the dermal papilla of the hair root; not detected in any other tissues

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P60371 | HPA portal (live; not the pinned values)

KRTAP12-4 | Neither / Low

ENSG00000212933

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.5 nTPM; skin/bulk; hpa_rna_consensus; manageable; 1.379 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. In the hair cortex, hair keratin intermediate filaments are embedded in an interfilamentous matrix, consisting of hair keratin-associated proteins (KRTAP), which are essential for the formation of a rigid and resistant hair shaft through their extensive disulfide bond cross-linking with abundant cysteine residues of hair keratins. The matrix proteins include the high-sulfur and high-glycine-tyrosine keratins

Curated tissue note. Restricted to a narrow region of the hair fiber cuticle, lying approximately 20 cell layers above the apex of the dermal papilla of the hair root; not detected in any other tissues

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P60329 | HPA portal (live; not the pinned values)

KRTAP13-1 | Neither / Selectivity

ENSG00000198390

Decision. Insufficient reproductive enrichment; selectivity alone is not proof of unsafe targeting.

Normal RNA / IHC. 8.7 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. In the hair cortex, hair keratin intermediate filaments are embedded in an interfilamentous matrix, consisting of hair keratin-associated proteins (KRTAP), which are essential for the formation of a rigid and resistant hair shaft through their extensive disulfide bond cross-linking with abundant cysteine residues of hair keratins. The matrix proteins include the high-sulfur and high-glycine-tyrosine keratins

Curated tissue note. Weak expression seen in the late matrix and entire cortex area of the hair follicle

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IUC0 | HPA portal (live; not the pinned values)

KRTAP19-8 | Neither / Low

ENSG00000206102

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; bone marrow/bulk; hpa_rna_consensus; vital; 4.145 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. In the hair cortex, hair keratin intermediate filaments are embedded in an interfilamentous matrix, consisting of hair keratin-associated proteins (KRTAP), which are essential for the formation of a rigid and resistant hair shaft through their extensive disulfide bond cross-linking with abundant cysteine residues of hair keratins. The matrix proteins include the high-sulfur and high-glycine-tyrosine keratins

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q3LI54 | HPA portal (live; not the pinned values)

KRTAP20-1 | Neither / Low

ENSG00000244624

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.4 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. In the hair cortex, hair keratin intermediate filaments are embedded in an interfilamentous matrix, consisting of hair keratin-associated proteins (KRTAP), which are essential for the formation of a rigid and resistant hair shaft through their extensive disulfide bond cross-linking with abundant cysteine residues of hair keratins. The matrix proteins include the high-sulfur and high-glycine-tyrosine keratins

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q3LI63 | HPA portal (live; not the pinned values)

KRTAP20-2 | Neither / Low

ENSG00000184032

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.4 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0.722 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Lung Squamous Cell Carcinoma (validation): 1/68 (1.5%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. In the hair cortex, hair keratin intermediate filaments are embedded in an interfilamentous matrix, consisting of hair keratin-associated proteins (KRTAP), which are essential for the formation of a rigid and resistant hair shaft through their extensive disulfide bond cross-linking with abundant cysteine residues of hair keratins. The matrix proteins include the high-sulfur and high-glycine-tyrosine keratins

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q3LI61 | HPA portal (live; not the pinned values)

KRTAP21-1 | Neither / Low

ENSG00000187005

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; skin/bulk; hpa_rna_consensus; manageable; 1.001 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. In the hair cortex, hair keratin intermediate filaments are embedded in an interfilamentous matrix, consisting of hair keratin-associated proteins (KRTAP), which are essential for the formation of a rigid and resistant hair shaft through their extensive disulfide bond cross-linking with abundant cysteine residues of hair keratins. The matrix proteins include the high-sulfur and high-glycine-tyrosine keratins

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q3LI58 | HPA portal (live; not the pinned values)

KRTAP21-2 | Neither / Low

ENSG00000187026

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.3 nTPM; skin/bulk; hpa_rna_consensus; manageable; 1.37 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 3/1022 (0.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. In the hair cortex, hair keratin intermediate filaments are embedded in an interfilamentous matrix, consisting of hair keratin-associated proteins (KRTAP), which are essential for the formation of a rigid and resistant hair shaft through their extensive disulfide bond cross-linking with abundant cysteine residues of hair keratins. The matrix proteins include the high-sulfur and high-glycine-tyrosine keratins

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q3LI59 | HPA portal (live; not the pinned values)

KRTAP6-1 | Neither / Low

ENSG00000184724

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0.3941 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. In the hair cortex, hair keratin intermediate filaments are embedded in an interfilamentous matrix, consisting of hair keratin-associated proteins (KRTAP), which are essential for the formation of a rigid and resistant hair shaft through their extensive disulfide bond cross-linking with abundant cysteine residues of hair keratins. The matrix proteins include the high-sulfur and high-glycine-tyrosine keratins

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q3LI64 | HPA portal (live; not the pinned values)

LCE3C | Neither / Selectivity

ENSG00000244057

Decision. Insufficient reproductive enrichment; selectivity alone is not proof of unsafe targeting.

Normal RNA / IHC. 1.7 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Head and Neck Squamous Cell Carcinoma (TCGA): 71/492 (14.4%); Skin Cuteneous Melanoma (TCGA): 8/99 (8.1%); Bladder Urothelial Carcinoma (TCGA): 2/169 (1.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. A structural component of the cornified envelope of the stratum corneum involved in innate cutaneous host defense (Probable). Possesses defensin-like antimicrobial activity against a broad spectrum of Gram-positive and Gram-negative bacteria, both aerobic and anaerobic species. Upon inflammation, may regulate skin barrier repair by shaping cutaneous microbiota composition and immune response to bacterial antigens (PubMed:28634035)

Curated tissue note. Skin-specific. Expression was readily detected in adult trunk skin, adult arm skin, fetal skin, penal skin, vulva, esophagus and tongue. Not expressed in the cervix, rectum, lung, colon, or placenta

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5T5A8 | HPA portal (live; not the pinned values)

LHX8 | Neither / Low

ENSG00000162624

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 12.3 nTPM; tongue/smooth muscle cells; hpa_single_cell_tissue; protected; 0.07201 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 7/133 (5.3%); Head and Neck Squamous Cell Carcinoma (TCGA): 13/492 (2.6%); Lung Squamous Cell Carcinoma (TCGA): 11/489 (2.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Transcription factor involved in differentiation of certain neurons and mesenchymal cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q68G74 | HPA portal (live; not the pinned values)

LIPJ | Neither / Antibody

ENSG00000204022

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.7 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 2.476 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Prostate Adenocarcinoma (TCGA): 4/480 (0.8%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 2/283 (0.7%)

Cancer IHC. breast cancer: 6/12 (50.0%); pancreatic cancer: 3/10 (30.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5W064 | HPA portal (live; not the pinned values)

LITAFD | Neither / Screening

ENSG00000283516

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.8 nTPM; liver/kupffer cells; hpa_single_cell_tissue; vital; 3.304 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 24/283 (8.5%); Testicular Germ Cell Tumor (TCGA): 7/133 (5.3%); Kidney Renal Papillary Cell Carcinoma (TCGA): 12/282 (4.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GVX0 | HPA portal (live; not the pinned values)

LRRC72 | Neither / Antibody

ENSG00000205858

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.7 nTPM; bone marrow/erythroid cells; hpa_single_cell_tissue; vital; 0.7712 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. ovarian cancer: 12/12 (100.0%); cervical cancer: 11/11 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NJI9 | HPA portal (live; not the pinned values)

LRRC74A | Neither / Antibody

ENSG00000100565

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.9 nTPM; unsited/Microglial cells; hpa_single_cell; unresolved; 1.702 TPM; blood/M2; dice_m2; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Pancreatic Adenocarcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. colorectal cancer: 11/11 (100.0%); prostate cancer: 6/8 (75.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q0VAA2 | HPA portal (live; not the pinned values)

LRRIQ4 | Neither / Antibody

ENSG00000188306

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.4 nTPM; esophagus/t-cells; hpa_single_cell_tissue; vital; 1.259 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 8/207 (3.9%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 9/283 (3.2%); Colon Adenocarcinoma (validation): 10/486 (2.1%)

Cancer IHC. pancreatic cancer: 8/9 (88.9%); stomach cancer: 9/12 (75.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NIV6 | HPA portal (live; not the pinned values)

MAGEA2 | Neither / Low

ENSG00000268606

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 33/99 (33.3%); Lung Squamous Cell Carcinoma (TCGA): 149/489 (30.5%); Lung Squamous Cell Carcinoma (validation): 20/68 (29.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Reduces p53/TP53 transactivation function through recruitment of HDAC3 to p53/TP53 transcription sites. Also represses p73/TP73 activity. Proposed to enhance ubiquitin ligase activity of RING-type zinc finger-containing E3 ubiquitin-protein ligases. In vitro enhances ubiquitin ligase activity of TRIM28 and stimulates p53/TP53 ubiquitination by TRIM28 potentially in presence of Ubl-conjugating enzyme UBE2H. Proposed to act through ... [full text in table]

Curated tissue note. Expressed in many tumors of several types, such as melanoma, head and neck squamous cell carcinoma, lung carcinoma and breast carcinoma, but not in normal tissues except for testes

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P43356 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

MAGEA2B | Neither / Low

ENSG00000183305

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 32/99 (32.3%); Lung Squamous Cell Carcinoma (TCGA): 108/489 (22.1%); Stomach Adenocarcinoma (TCGA): 71/346 (20.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Reduces p53/TP53 transactivation function through recruitment of HDAC3 to p53/TP53 transcription sites. Also represses p73/TP73 activity. Proposed to enhance ubiquitin ligase activity of RING-type zinc finger-containing E3 ubiquitin-protein ligases. In vitro enhances ubiquitin ligase activity of TRIM28 and stimulates p53/TP53 ubiquitination by TRIM28 potentially in presence of Ubl-conjugating enzyme UBE2H. Proposed to act through ... [full text in table]

Curated tissue note. Expressed in many tumors of several types, such as melanoma, head and neck squamous cell carcinoma, lung carcinoma and breast carcinoma, but not in normal tissues except for testes

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P43356 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

MAGEA9 | Neither / Low

ENSG00000123584

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.3 nTPM; liver/t-cells; hpa_single_cell_tissue; vital; 0.4208 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Lung Squamous Cell Carcinoma (validation): 14/68 (20.6%); Lung Squamous Cell Carcinoma (TCGA): 94/489 (19.2%); Bladder Urothelial Carcinoma (TCGA): 15/169 (8.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Not known, though may play a role in embryonal development and tumor transformation or aspects of tumor progression

Curated tissue note. Expressed in many tumors of several types, such as melanoma, head and neck squamous cell carcinoma, lung carcinoma and breast carcinoma, but not in normal tissues except for testes and placenta

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P43362 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

MAGEB10 | Neither / Antibody

ENSG00000177689

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.2 nTPM; skin/langerhans cells; hpa_single_cell_tissue; manageable; 2.025 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 12/176 (6.8%); Testicular Germ Cell Tumor (TCGA): 8/133 (6.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 8/283 (2.8%)

Cancer IHC. melanoma: 3/10 (30.0%); renal cancer: 1/11 (9.1%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96LZ2 | HPA portal (live; not the pinned values)

MAGEB16 | Neither / Antibody

ENSG00000189023

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.2 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.0141 TPM; blood/naive CD4 T-cell; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 18/133 (13.5%); Skin Cuteneous Melanoma (TCGA): 3/99 (3.0%); Bladder Urothelial Carcinoma (TCGA): 3/169 (1.8%)

Cancer IHC. colorectal cancer: 11/12 (91.7%); skin cancer: 6/11 (54.5%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A2A368 | HPA portal (live; not the pinned values)

MAGEB17 | Neither / Antibody

ENSG00000182798

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.8 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 1.2 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 70/207 (33.8%); Colon Adenocarcinoma (validation): 112/486 (23.0%); Colon Adenocarcinoma (TCGA): 56/254 (22.0%)

Cancer IHC. glioma: 11/12 (91.7%); liver cancer: 11/12 (91.7%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A8MXT2 | HPA portal (live; not the pinned values)

MAGEB5 | Neither / Antibody

ENSG00000188408

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.3 nTPM; pancreas/exocrine glandular cells; hpa_single_cell_tissue; vital; 0.2316 TPM; blood/TH17; dice_th17; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. melanoma: 11/11 (100.0%); renal cancer: 7/11 (63.6%)

Biology. Expressed in testis. Not expressed in other normal tissues, but is expressed in tumors of different histological origins

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9BZ81 | HPA portal (live; not the pinned values)

MAGEB6 | Neither / Unassessed

ENSG00000176746

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 1.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 9/133 (6.8%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. stomach cancer: 1/12 (8.3%); breast cancer: 0/10 (0.0%)

Biology. Expressed in testis. Not expressed in other normal tissues, but is expressed in tumors of different histological origins

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N7X4 | HPA portal (live; not the pinned values)

MAGEB6B | Neither / Low

ENSG00000232030

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.0055 nTPM; blood/MAIT T-cell; hpa_immune_cell_samples; vital; 0.0061 TPM; blood/MAIT T-cell; hpa_immune_cell_samples; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A0J9YX57 | HPA portal (live; not the pinned values)

MAJIN | Neither / Cellular

ENSG00000168070

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 23.6 nTPM; kidney/proximal tubular cells; hpa_single_cell_tissue; vital; 11.4 TPM; blood/Non-switched memory B-cell; hpa_immune_monaco; vital

Cancer RNA. Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 56/283 (19.8%); Kidney Renal Papillary Cell Carcinoma (TCGA): 37/282 (13.1%); Ovary Serous Cystadenocarcinoma (TCGA): 36/349 (10.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Meiosis-specific telomere-associated protein involved in meiotic telomere attachment to the nucleus inner membrane, a crucial step for homologous pairing and synapsis. Component of the MAJIN-TERB1-TERB2 complex, which promotes telomere cap exchange by mediating attachment of telomeric DNA to the inner nuclear membrane and replacement of the protective cap of telomeric chromosomes: in early meiosis, the MAJIN-TERB1-TERB2 complex ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q3KP22 | HPA portal (live; not the pinned values)

MBD3L2 | Neither / Low

ENSG00000230522

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 12/133 (9.0%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Ovary Serous Cystadenocarcinoma (TCGA): 2/349 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May displace the NuRD complex from chromatin

Curated tissue note. Detected at low levels in several somatic tissues (PubMed:12504854, PubMed:15701600). Highly expressed in the ovarian teratocarcinoma cell line PA-1 (PubMed:12504854)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NHZ7 | HPA portal (live; not the pinned values)

MBD3L3 | Neither / Low

ENSG00000182315

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.8329 nTPM; blood/myeloid DC; hpa_immune_cell_samples; vital; 0.8 TPM; blood/Memory CD4 T-cell Th1; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 5/133 (3.8%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NE82 | HPA portal (live; not the pinned values)

MBD3L4 | Neither / Low

ENSG00000205718

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NDZ8 | HPA portal (live; not the pinned values)

MBD3L5 | Neither / Low

ENSG00000237247

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; tongue/basal keratinocytes; hpa_single_cell_tissue; protected; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NJ08 | HPA portal (live; not the pinned values)

MEIOSIN | Neither / Antibody

ENSG00000237452

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.2 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.5582 TPM; blood/NK; dice_nk; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 4/133 (3.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 3/283 (1.1%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. endometrial cancer: 1/11 (9.1%); renal cancer: 1/12 (8.3%)

Biology. Gatekeeper of meiotic initiation in both male and female germ cells. In complex with STRA8, directly activates the transcription of a subset of critical meiotic genes playing a central role in cell-cycle switching from mitosis to meiosis. Temporal expression of MEIOSIN is required for meiotic entry decision

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt C9JSJ3 | HPA portal (live; not the pinned values)

MEX3B | Neither / Cellular

ENSG00000183496

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 28.4 nTPM; skin/fibroblasts; hpa_single_cell_tissue; manageable; 7.6 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 43/50 (86.0%); Testicular Germ Cell Tumor (TCGA): 73/133 (54.9%); Glioblastoma Multiforme (validation): 29/58 (50.0%)

Cancer IHC. testis cancer: 3/12 (25.0%); breast cancer: 0/11 (0.0%)

Biology. RNA-binding protein. May be involved in post-transcriptional regulatory mechanisms

Curated tissue note. Highest levels found in fetal brain and testis. Detected in the adult intestinal epithelium, specifically in goblet cell at protein level

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZN04 | HPA portal (live; not the pinned values)

MMP20 | Neither / Low

ENSG00000137674

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.7 nTPM; kidney/proximal tubular cells; hpa_single_cell_tissue; vital; 0.2412 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Breast Invasive Carcinoma (TCGA): 20/1022 (2.0%); Ovary Serous Cystadenocarcinoma (validation): 1/81 (1.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Degrades amelogenin, the major protein component of the enamel matrix and two of the macromolecules characterizing the cartilage extracellular matrix: aggrecan and the cartilage oligomeric matrix protein (COMP). May play a central role in tooth enamel formation. Cleaves aggrecan at the '360-Asn-|-Phe-361' site

Curated tissue note. Expressed specifically in the enamel organ

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O60882 | HPA portal (live; not the pinned values)

MOS | Neither / Low

ENSG00000172680

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; fallopian tube/granulocytes; hpa_single_cell_tissue; vital; 0.6112 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Liver Hepatocellular Carcinoma (TCGA): 1/362 (0.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Serine/threonine kinase involved in the regulation of MAPK signaling. Is an activator of the ERK1/2 signaling cascade playing an essential role in the stimulation of oocyte maturation

Curated tissue note. Highly expressed in oocytes. Lower expression is detected in early embryo

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P00540 | HPA portal (live; not the pinned values)

MPC1L | Neither / Screening

ENSG00000238205

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 2.2 nTPM; pancreas/exocrine glandular cells; hpa_single_cell_tissue; vital; 1.497 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 16/133 (12.0%); Lung Adenocarcinoma (TCGA): 3/497 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Mediates the uptake of pyruvate into mitochondria

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DKB6 | HPA portal (live; not the pinned values)

MRGPRG | Neither / Antibody

ENSG00000182170

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.2848 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. Orphan receptor. May regulate nociceptor function and/or development, including the sensation or modulation of pain (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q86SM5 | HPA portal (live; not the pinned values)

MRGPRX4 | Neither / Low

ENSG00000179817

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.1 nTPM; bronchus/basal respiratory cells; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 2/99 (2.0%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. G protein-coupled receptor for bile acids, which is specifically expressed in sensory neurons of dorsal root ganglion and is involved in itch perception (PubMed:31068464, PubMed:31500698, PubMed:34789874, PubMed:38718132, PubMed:39476841). Activated by bile acids, such as deoxycholate, chenodeoxycholate, taurocholate, taurodeoxycholate and taurodeoxycholate (PubMed:31068464, PubMed:31500698, PubMed:39476841). Has a preference for ... [full text in table]

Curated tissue note. Uniquely localized in a subset of small dorsal root and trigeminal sensory neurons

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96LA9 | HPA portal (live; not the pinned values)

MS4A13 | Neither / Antibody

ENSG00000204979

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 4.1 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.2268 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. breast cancer: 2/10 (20.0%); urothelial cancer: 2/11 (18.2%)

Biology. May be involved in signal transduction as a component of a multimeric receptor complex

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5J8X5 | HPA portal (live; not the pinned values)

MS4A5 | Neither / Antibody

ENSG00000166930

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.7 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 1.6 TPM; blood/Switched memory B-cell; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 3/1022 (0.3%)

Cancer IHC. prostate cancer: 3/8 (37.5%); liver cancer: 4/12 (33.3%)

Biology. May be involved in signal transduction as a component of a multimeric receptor complex

Curated tissue note. Expressed at high level in the testis. Detected also in the pancreas, heart and in the brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H3V2 | HPA portal (live; not the pinned values)

MSL3B | Neither / Unassessed

ENSG00000293137

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. Expanded maxima were not audited for this inherited exclusion; see original evidence in the table.

Cancer RNA. No exact-ID RNA coverage in the HPA cancer snapshot

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Probable non-catalytic component of the MSL histone acetyltransferase complex, a multiprotein complex that mediates the majority of histone H4 acetylation at 'Lys-16' (H4K16ac), an epigenetic mark that prevents chromatin compaction

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0C860 | HPA portal (live; not the pinned values)

MYO1H | Neither / Antibody

ENSG00000174527

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.6 nTPM; skeletal muscle/mixed cell types; hpa_single_cell_tissue; vital; 5.118 TPM; blood/NK; dice_nk; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 4/50 (8.0%); Kidney Chromophobe (TCGA): 4/64 (6.2%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%)

Cancer IHC. liver cancer: 12/12 (100.0%); pancreatic cancer: 11/11 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

NBPF4 | Neither / Antibody

ENSG00000196427

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.1 nTPM; small intestine/bulk; hpa_rna_consensus; vital; 1.398 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 30/50 (60.0%); Breast Invasive Carcinoma (TCGA): 299/1022 (29.3%); Rectum Adenocarcinoma (validation): 10/207 (4.8%)

Cancer IHC. melanoma: 6/12 (50.0%); urothelial cancer: 4/12 (33.3%)

Biology. Expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96M43 | HPA portal (live; not the pinned values)

NEUROG1 | Neither / Low

ENSG00000181965

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 10.8 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 12/133 (9.0%); Bladder Urothelial Carcinoma (TCGA): 2/169 (1.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Acts as a transcriptional regulator. Involved in the initiation of neuronal differentiation. Activates transcription by binding to the E box (5'-CANNTG-3'). Associates with chromatin to enhancer regulatory elements in genes encoding key transcriptional regulators of neurogenesis (By similarity)

Curated tissue note. Expression restricted to the embryonic nervous system

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q92886 | HPA portal (live; not the pinned values)

NFILZ | Neither / Cellular

ENSG00000268480

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 23.72 nTPM; blood/NK-cell; hpa_immune_cell_samples; vital; 24.26 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Colon Adenocarcinoma (validation): 1/486 (0.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A5F9ZHS7 | HPA portal (live; not the pinned values)

NKX1-1 | Neither / Antibody

ENSG00000235608

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.2 nTPM; adipose tissue/macrophages; hpa_single_cell_tissue; vital; 0.484 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. glioma: 3/10 (30.0%); liver cancer: 3/12 (25.0%)

Biology. May be required for the coordinated crosstalk of factors involved in the maintenance of energy homeostasis, possibly by regulating the transcription of specific factors involved in energy balance

Curated tissue note. Expressed in hemopoietic progenitor cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q15270 | HPA portal (live; not the pinned values)

NKX2-4 | Neither / Low

ENSG00000125816

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.5 nTPM; hypothalamus/bulk; hpa_rna_consensus; vital; 0.5388 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Kidney Renal Papillary Cell Carcinoma (TCGA): 9/282 (3.2%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 9/283 (3.2%); Skin Cuteneous Melanoma (TCGA): 2/99 (2.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Probable transcription factor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H2Z4 | HPA portal (live; not the pinned values)

NLRP11 | Neither / Antibody

ENSG00000179873

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 5.9 nTPM; esophagus/b-cells; hpa_single_cell_tissue; vital; 0.9949 TPM; blood/NK; dice_nk; vital

Cancer RNA. Glioblastoma Multiforme (validation): 3/58 (5.2%); Lung Adenocarcinoma (validation): 4/105 (3.8%); Liver Hepatocellular Carcinoma (validation): 8/231 (3.5%)

Cancer IHC. skin cancer: 9/12 (75.0%); glioma: 5/12 (41.7%)

Biology. Involved in inflammation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P59045 | HPA portal (live; not the pinned values)

NLRP8 | Neither / Antibody

ENSG00000179709

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.4 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.4362 TPM; blood/NK; dice_nk; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 1/1022 (0.1%)

Cancer IHC. colorectal cancer: 4/12 (33.3%); stomach cancer: 3/10 (30.0%)

Biology. Involved in inflammation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q86W28 | HPA portal (live; not the pinned values)

NLRP9 | Neither / Unassessed

ENSG00000185792

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 2.2 nTPM; lymph node/b-cells; hpa_single_cell_tissue; vital; 2.378 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 71/133 (53.4%); Liver Hepatocellular Carcinoma (validation): 6/231 (2.6%); Prostate Adenocarcinoma (TCGA): 10/480 (2.1%)

Cancer IHC. colorectal cancer: 7/12 (58.3%); stomach cancer: 5/11 (45.5%)

Biology. As the sensor component of the NLRP9 inflammasome, plays a crucial role in innate immunity and inflammation. In response to pathogens, including rotavirus, initiates the formation of the inflammasome polymeric complex, made of NLRP9, PYCARD and CASP1. Recruitment of proCASP1 to the inflammasome promotes its activation and CASP1-catalyzed IL1B and IL18 maturation and release in the extracellular milieu. The active cytokines stimulate ... [full text in table]

Curated tissue note. Expressed in ileum intestinal epithelial cells. Not detected in peripheral blood mononuclear cells (PubMed:28636595). Expressed in cerebral endothelial cells and, at much lower levels, in brain pericytes ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7RTR0 | HPA portal (live; not the pinned values)

NMBR | Neither / Cellular

ENSG00000135577

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 27.9 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.4438 TPM; blood/NK; dice_nk; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Receptor for neuromedin-B (PubMed:1655761). Contributes to the maintenance of basal sigh rate through signaling in the pre-Botzinger complex, a cluster of several thousand neurons in the ventrolateral medulla responsible for inspiration during respiratory activity (By similarity). Contributes to the induction of sneezing following exposure to chemical irritants or allergens which causes release of NMB by nasal sensory neurons and ... [full text in table]

Curated tissue note. Expressed in epididymis (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P28336 | HPA portal (live; not the pinned values)

NMS | Neither / Low

ENSG00000204640

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.3 nTPM; skeletal muscle/smooth muscle cells; hpa_single_cell_tissue; vital; 1.094 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Stomach Adenocarcinoma (TCGA): 1/346 (0.3%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Implicated in the regulation of circadian rhythms through autocrine and/or paracrine actions

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5H8A3 | HPA portal (live; not the pinned values)

NOBOX | Neither / Low

ENSG00000106410

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.4 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.4114 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Head and Neck Squamous Cell Carcinoma (TCGA): 30/492 (6.1%); Lung Squamous Cell Carcinoma (TCGA): 14/489 (2.9%); Lung Squamous Cell Carcinoma (validation): 1/68 (1.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Transcription factor which may play a role in oogenesis. Binds preferentially to the DNA sequences 5'-TAATTG-3', 5'-TAGTTG-3' and 5'-TAATTA-3'

Curated tissue note. Expressed in ovaries, testes and pancreas. Expressed within all stages of the adult female germline, from primordial follicles through to MII oocytes

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O60393 | HPA portal (live; not the pinned values)

NOX5 | Neither / Selectivity

ENSG00000255346

Decision. Insufficient reproductive enrichment; selectivity alone is not proof of unsafe targeting.

Normal RNA / IHC. 11.8 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.635 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 13/50 (26.0%); Kidney Renal Clear Cell Carcinoma (validation): 20/100 (20.0%); Uterine Corpus Endometrial Carcinoma (TCGA): 9/176 (5.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Calcium-dependent NADPH oxidase that catalyzes the generation of superoxide from molecular oxygen utilizing NADPH as an electron donor (PubMed:12686516). Also synthesizes NAADP from its reduced NAADPH form which promotes Ca(2+) signaling during T cell activation (PubMed:34784249). May play a role in cell growth and apoptosis (PubMed:12686516) Calcium-dependent NADPH oxidase that catalyzes the generation of superoxide from molecular ... [full text in table]

Curated tissue note. Mainly expressed in pachytene spermatocytes of testis and in lymphocyte-rich areas of spleen and lymph nodes. Also detected in ovary, placenta, pancreas, cardiac fibroblasts. Expressed in B-cells and prostate ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96PH1 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

NPAP1 | Neither / Antibody

ENSG00000185823

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 7.5 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 2.8 TPM; blood/naive CD8 T-cell; hpa_immune_monaco; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 6/176 (3.4%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. colorectal cancer: 5/12 (41.7%); stomach cancer: 2/12 (16.7%)

Biology. May be involved in spermatogenesis

Curated tissue note. Testis-specific in adults. In fetal brain expressed only from the paternal allele

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9NZP6 | HPA portal (live; not the pinned values)

NT5C1B | Neither / Antibody

ENSG00000185013

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.481 nTPM; blood/plasmacytoid DC; hpa_immune_cell_samples; vital; 9.1 TPM; blood/Central memory CD8 T-cell; hpa_immune_monaco; vital

Cancer RNA. Kidney Chromophobe (TCGA): 4/64 (6.2%); Bladder Urothelial Carcinoma (TCGA): 4/169 (2.4%); Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%)

Cancer IHC. colorectal cancer: 9/12 (75.0%); liver cancer: 8/12 (66.7%)

Biology. Catalyzes the hydrolysis of nucleotide monophosphates, releasing inorganic phosphate and the corresponding nucleoside, AMP is the major substrate

Curated tissue note. Highly expressed in testis, placenta and pancreas. Detected at lower levels in heart, kidney, liver and lung

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96P26 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

NT5C1B-RDH14 | Neither / Antibody

ENSG00000250741

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.1017 nTPM; blood/gdT-cell; hpa_immune_cell_samples; vital; 0.1113 TPM; blood/gdT-cell; hpa_immune_cell_samples; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. colorectal cancer: 9/12 (75.0%); liver cancer: 8/12 (66.7%)

Biology. Catalyzes the hydrolysis of nucleotide monophosphates, releasing inorganic phosphate and the corresponding nucleoside, AMP is the major substrate

Curated tissue note. Highly expressed in testis, placenta and pancreas. Detected at lower levels in heart, kidney, liver and lung

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96P26 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OCM2 | Neither / Antibody

ENSG00000135175

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.2439 nTPM; blood/T-reg; hpa_immune_cell_samples; vital; 1.766 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. liver cancer: 1/12 (8.3%); breast cancer: 0/11 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0CE71 | HPA portal (live; not the pinned values)

OR10A4 | Neither / Low

ENSG00000170782

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6687 nTPM; blood/plasmacytoid DC; hpa_immune_cell_samples; vital; 0.8637 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor (Potential). May be involved in taste perception

Curated tissue note. Expressed in the tongue

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H209 | HPA portal (live; not the pinned values)

OR10A7 | Neither / Antibody

ENSG00000179919

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.2649 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. breast cancer: 1/10 (10.0%); ovarian cancer: 1/11 (9.1%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGE5 | HPA portal (live; not the pinned values)

OR10D3 | Neither / Low

ENSG00000197309

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.0042 nTPM; blood/NK-cell; hpa_immune_cell_samples; vital; 0.3221 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NH80 | HPA portal (live; not the pinned values)

OR10H5 | Neither / Low

ENSG00000172519

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.7 nTPM; skin/b-cells; hpa_single_cell_tissue; vital; 1.817 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 16/176 (9.1%); Bladder Urothelial Carcinoma (TCGA): 4/169 (2.4%); Testicular Germ Cell Tumor (TCGA): 3/133 (2.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGA6 | HPA portal (live; not the pinned values)

OR10J1 | Neither / Screening

ENSG00000196184

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.7 nTPM; unsited/Cone photoreceptor cells; hpa_single_cell; unresolved; 1.238 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P30954 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR11A1 | Neither / Low

ENSG00000204694

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.3982 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9GZK7 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR11G2 | Neither / Cellular

ENSG00000196832

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 5.5 nTPM; tongue/t-cells; hpa_single_cell_tissue; vital; 1.701 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR11H4 | Neither / Antibody

ENSG00000176198

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.3 nTPM; lung/b-cells; hpa_single_cell_tissue; vital; 2.032 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. colorectal cancer: 9/10 (90.0%); pancreatic cancer: 7/12 (58.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR11H6 | Neither / Low

ENSG00000176219

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; lymph node/b-cells; hpa_single_cell_tissue; vital; 0.965 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGC7 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR13C3 | Neither / Unassessed

ENSG00000204246

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.7 nTPM; bone marrow/erythroid cells; hpa_single_cell_tissue; vital; 0.3711 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR13D1 | Neither / Unassessed

ENSG00000179055

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.5 nTPM; bone marrow/t-cells; hpa_single_cell_tissue; vital; 1.521 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR13G1 | Neither / Low

ENSG00000197437

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.5 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGZ3 | HPA portal (live; not the pinned values)

OR14A16 | Neither / Low

ENSG00000196772

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.5 nTPM; colon/undifferentiated cells; hpa_single_cell_tissue; protected; 0.1314 TPM; blood/M2; dice_m2; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Adenocarcinoma (TCGA): 2/497 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NHC5 | HPA portal (live; not the pinned values)

OR14A2 | Neither / Antibody

ENSG00000241128

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.6 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.5 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. prostate cancer: 1/12 (8.3%); breast cancer: 0/11 (0.0%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96R54 | HPA portal (live; not the pinned values)

OR14J1 | Neither / Cellular

ENSG00000204695

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 2.019 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 8.445 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 173/207 (83.6%); Colon Adenocarcinoma (validation): 404/486 (83.1%); Uterine Corpus Endometrial Carcinoma (TCGA): 18/176 (10.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9UGF5 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR1C1 | Neither / Low

ENSG00000221888

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.3893 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 0.5 TPM; blood/Terminal effector memory CD4 T-cell; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q15619 | HPA portal (live; not the pinned values)

OR1E1 | Neither / Low

ENSG00000180016

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.7662 nTPM; blood/plasmacytoid DC; hpa_immune_cell_samples; vital; 1.516 TPM; blood/NK; dice_nk; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Glioblastoma Multiforme (TCGA): 1/141 (0.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P30953 | HPA portal (live; not the pinned values)

OR1G1 | Neither / Low

ENSG00000183024

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.7 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.286 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P47890 | HPA portal (live; not the pinned values)

OR1J4 | Neither / Low

ENSG00000239590

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.3 nTPM; adipose tissue/t-cells; hpa_single_cell_tissue; vital; 4.389 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGS1 | HPA portal (live; not the pinned values)

OR1K1 | Neither / Low

ENSG00000165204

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.5434 nTPM; blood/memory CD8 T-cell; hpa_immune_cell_samples; vital; 2.356 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGR3 | HPA portal (live; not the pinned values)

OR1L3 | Neither / Antibody

ENSG00000171481

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.2 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.255 TPM; blood/NK; dice_nk; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. glioma: 2/12 (16.7%); breast cancer: 0/10 (0.0%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NH93 | HPA portal (live; not the pinned values)

OR1N1 | Neither / Low

ENSG00000171505

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; retina/bulk; hpa_rna_consensus; vital; 1.549 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (TCGA): 17/349 (4.9%); Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGS0 | HPA portal (live; not the pinned values)

OR2AK2 | Neither / Cellular

ENSG00000187080

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 0.7 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 10.39 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR2C3 | Neither / Low

ENSG00000196242

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 6.314 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 3.506 TPM; blood/basophil; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N628 | HPA portal (live; not the pinned values)

OR2D2 | Neither / Low

ENSG00000166368

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.4 nTPM; stomach/fibroblasts; hpa_single_cell_tissue; protected; 0.7955 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H210 | HPA portal (live; not the pinned values)

OR2F1 | Neither / Unassessed

ENSG00000213215

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 2 nTPM; colon/distal enterocytes; hpa_single_cell_tissue; protected; 0.2875 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q13607 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR2F2 | Neither / Low

ENSG00000221910

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; vascular/smooth muscle cells; hpa_single_cell_tissue; vital; 0.6483 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O95006 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR2G6 | Neither / Low

ENSG00000188558

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 3.2 nTPM; vascular/t-cells; hpa_single_cell_tissue; vital; 3.592 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Kidney Renal Papillary Cell Carcinoma (TCGA): 3/282 (1.1%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5TZ20 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR2J2 | Neither / Low

ENSG00000204700

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 4.8 nTPM; skin/granulocytes; hpa_single_cell_tissue; vital; 0.7385 TPM; blood/NK; dice_nk; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O76002 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR2J3 | Neither / Low

ENSG00000204701

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; skeletal muscle/fibroblasts; hpa_single_cell_tissue; vital; 0.2476 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor involved in the detection of the flavor compound cis-3-hexen-1-ol (C3HEX), a compound typically described as 'green grassy' or the smell of 'cut grass'

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O76001 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR2K2 | Neither / Antibody

ENSG00000171133

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.3 nTPM; esophagus/macrophages; hpa_single_cell_tissue; vital; 1.322 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. testis cancer: 8/9 (88.9%); melanoma: 7/10 (70.0%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGT1 | HPA portal (live; not the pinned values)

OR2V2 | Neither / Antibody

ENSG00000182613

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.861 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 1.187 TPM; blood/basophil; hpa_immune_cell_samples; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%); Kidney Chromophobe (TCGA): 1/64 (1.6%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. ovarian cancer: 1/11 (9.1%); melanoma: 1/12 (8.3%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96R30 | HPA portal (live; not the pinned values)

OR2W1 | Neither / Low

ENSG00000204704

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.4309 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y3N9 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR3A2 | Neither / Unassessed

ENSG00000221882

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 3.487 nTPM; blood/MAIT T-cell; hpa_immune_cell_samples; vital; 4.825 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 15/133 (11.3%); Uterine Corpus Endometrial Carcinoma (TCGA): 10/176 (5.7%); Ovary Serous Cystadenocarcinoma (TCGA): 10/349 (2.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR4A16 | Neither / Low

ENSG00000181961

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Adenocarcinoma (TCGA): 1/497 (0.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NH70 | HPA portal (live; not the pinned values)

OR4D1 | Neither / Cellular

ENSG00000141194

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 13.1 nTPM; pbmc/nk-cells; hpa_single_cell_tissue; vital; 5.997 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 8/176 (4.5%); Bladder Urothelial Carcinoma (TCGA): 3/169 (1.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q15615 | HPA portal (live; not the pinned values)

OR4D6 | Neither / Low

ENSG00000166884

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.2854 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGJ1 | HPA portal (live; not the pinned values)

OR4E1 | Neither / Unassessed

ENSG00000276240

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.807 nTPM; blood/naive CD8 T-cell; hpa_immune_cell_samples; vital; 3.646 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0C645 | HPA portal (live; not the pinned values)

OR4E2 | Neither / Low

ENSG00000221977

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1434 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 1.002 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR4F3 | Neither / Antibody

ENSG00000230178

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.4002 nTPM; blood/NK-cell; hpa_immune_cell_samples; vital; 0.4 TPM; blood/Memory CD4 T-cell Th2; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. cervical cancer: 1/10 (10.0%); breast cancer: 0/10 (0.0%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6IEY1 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR4K1 | Neither / Antibody

ENSG00000155249

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.1 nTPM; unsited/Oligodendrocytes; hpa_single_cell; unresolved; 0.5502 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. prostate cancer: 11/12 (91.7%); liver cancer: 4/12 (33.3%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGD4 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR4M1 | Neither / Antibody

ENSG00000176299

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1 nTPM; unsited/Skeletal myocytes; hpa_single_cell; unresolved; 0.292 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. lymphoma: 2/11 (18.2%); lung cancer: 2/12 (16.7%)

Biology. Olfactory receptor that acts as a receptor of Asprosin hormone, potentially at the surface of hepatocytes and may help to promote hepatocyte glucose release

Curated tissue note. Highly expressed in the testis and olfactory bulb

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGD0 | HPA portal (live; not the pinned values)

OR4M2 | Neither / Antibody

ENSG00000274102

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.3 nTPM; skeletal muscle/mixed cell types; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. lymphoma: 2/11 (18.2%); lung cancer: 2/12 (16.7%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGB6 | HPA portal (live; not the pinned values)

OR4M2B | Neither / Antibody

ENSG00000182974

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. lymphoma: 2/11 (18.2%); lung cancer: 2/12 (16.7%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A0X1KG70 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR4N2 | Neither / Low

ENSG00000176294

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.3 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.2256 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Glioblastoma Multiforme (validation): 19/58 (32.8%); Glioblastoma Multiforme (TCGA): 11/141 (7.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGD1 | HPA portal (live; not the pinned values)

OR4N4 | Neither / Antibody

ENSG00000183706

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.4 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 2/231 (0.9%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/10 (0.0%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N0Y3 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR4N4C | Neither / Antibody

ENSG00000279408

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.5 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.2126 TPM; blood/plasmacytoid DC; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/10 (0.0%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A096LPK9 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR4Q3 | Neither / Antibody

ENSG00000182652

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.2 nTPM; adipose tissue/nk-cells; hpa_single_cell_tissue; vital; 0.6373 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 3/176 (1.7%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. lymphoma: 3/9 (33.3%); breast cancer: 0/11 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR51A7 | Neither / Antibody

ENSG00000176895

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.4 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.1471 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NH64 | HPA portal (live; not the pinned values)

OR51I2 | Neither / Low

ENSG00000187918

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.1 nTPM; eye/muller glia cells; hpa_single_cell_tissue; vital; 0.5682 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H344 | HPA portal (live; not the pinned values)

OR51Q1 | Neither / Antibody

ENSG00000167360

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.3 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.322 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. prostate cancer: 9/11 (81.8%); pancreatic cancer: 6/8 (75.0%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NH59 | HPA portal (live; not the pinned values)

OR51S1 | Neither / Low

ENSG00000176922

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.3 nTPM; unsited/Astrocytes; hpa_single_cell; unresolved; 0.0239 TPM; blood/myeloid DC; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGJ8 | HPA portal (live; not the pinned values)

OR52D1 | Neither / Antibody

ENSG00000181609

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.1 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.454 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Colon Adenocarcinoma (validation): 2/486 (0.4%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H346 | HPA portal (live; not the pinned values)

OR52E2 | Neither / Antibody

ENSG00000176787

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.5 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 0.2362 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Ovary Serous Cystadenocarcinoma (TCGA): 1/349 (0.3%); Colon Adenocarcinoma (validation): 1/486 (0.2%)

Cancer IHC. stomach cancer: 8/11 (72.7%); colorectal cancer: 7/12 (58.3%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGJ4 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR52E4 | Neither / Low

ENSG00000180974

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; retina/bulk; hpa_rna_consensus; vital; 1.1 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Colon Adenocarcinoma (validation): 19/486 (3.9%); Rectum Adenocarcinoma (validation): 8/207 (3.9%); Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGH9 | HPA portal (live; not the pinned values)

OR52E6 | Neither / Low

ENSG00000205409

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.4847 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96RD3 | HPA portal (live; not the pinned values)

OR52E8 | Neither / Low

ENSG00000183269

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; unsited/Horizontal cells; hpa_single_cell; unresolved; 0.0175 TPM; blood/non-classical monocyte; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6IFG1 | HPA portal (live; not the pinned values)

OR52H1 | Neither / Low

ENSG00000181616

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.5 nTPM; pbmc/b-cells; hpa_single_cell_tissue; vital; 3.54 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGJ2 | HPA portal (live; not the pinned values)

OR52L1 | Neither / Low

ENSG00000183313

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.0128 nTPM; blood/memory CD8 T-cell; hpa_immune_cell_samples; vital; 1.039 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGH7 | HPA portal (live; not the pinned values)

OR56A1 | Neither / Unassessed

ENSG00000180934

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.2012 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 0.6 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR56A3 | Neither / Low

ENSG00000184478

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.4 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 0.2428 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 3/50 (6.0%); Bladder Urothelial Carcinoma (TCGA): 4/169 (2.4%); Liver Hepatocellular Carcinoma (validation): 4/231 (1.7%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NH54 | HPA portal (live; not the pinned values)

OR56A5 | Neither / Low

ENSG00000188691

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.005 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0C7T3 | HPA portal (live; not the pinned values)

OR5A1 | Neither / Low

ENSG00000172320

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.8 nTPM; unsited/Lymphatic endothelial cells; hpa_single_cell; unresolved; 2.5 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Colon Adenocarcinoma (validation): 17/486 (3.5%); Rectum Adenocarcinoma (validation): 6/207 (2.9%); Stomach Adenocarcinoma (TCGA): 3/346 (0.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGJ0 | HPA portal (live; not the pinned values)

OR5AC2 | Neither / Low

ENSG00000196578

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1843 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 0.0978 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9NZP5 | HPA portal (live; not the pinned values)

OR5B12 | Neither / Low

ENSG00000172362

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; breast/t-cells; hpa_single_cell_tissue; vital; 1.579 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Ovary Serous Cystadenocarcinoma (TCGA): 1/349 (0.3%); Prostate Adenocarcinoma (TCGA): 1/480 (0.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96R08 | HPA portal (live; not the pinned values)

OR5B2 | Neither / Low

ENSG00000172365

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; stomach/t-cells; hpa_single_cell_tissue; vital; 1.693 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96R09 | HPA portal (live; not the pinned values)

OR5B21 | Neither / Low

ENSG00000198283

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.6 nTPM; adipose tissue/dendritic cells; hpa_single_cell_tissue; vital; 4.065 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NL26 | HPA portal (live; not the pinned values)

OR5C1 | Neither / Low

ENSG00000148215

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.8 nTPM; bone marrow/b-cells; hpa_single_cell_tissue; vital; 0.93 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGR4 | HPA portal (live; not the pinned values)

OR5H14 | Neither / Low

ENSG00000236032

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 5.2 nTPM; kidney/b-cells; hpa_single_cell_tissue; vital; 0.5724 TPM; blood/basophil; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NHG9 | HPA portal (live; not the pinned values)

OR5H15 | Neither / Low

ENSG00000233412

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NDH6 | HPA portal (live; not the pinned values)

OR5H6 | Neither / Low

ENSG00000230301

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; salivary gland/mixed immune cells; hpa_single_cell_tissue; vital; 0.2316 TPM; blood/TH17; dice_th17; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGV6 | HPA portal (live; not the pinned values)

OR5M11 | Neither / Low

ENSG00000255223

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; urinary bladder/bulk; hpa_rna_consensus; protected; 0.6803 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 1/50 (2.0%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96RB7 | HPA portal (live; not the pinned values)

OR5M8 | Neither / Low

ENSG00000181371

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGP6 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR5V1 | Neither / Antibody

ENSG00000243729

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.2 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.1739 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 9/12 (75.0%); stomach cancer: 9/12 (75.0%)

Biology. G protein-coupled receptor that acts both as an odorant receptor, and as a classical G protein-coupled receptor outside the olfactory epithelium (By similarity). Ligand-binding causes a conformation change that triggers signaling via G(s)-class of G alpha proteins (GNAL/G(olf) or GNAS/G(s)) (By similarity). In olfactory epithelium, activation by methyl (9R,10E,12E)-9-methoxyoctadeca-10,12-dienoate, a plant odorant isolated from ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9UGF6 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR6A2 | Neither / Low

ENSG00000184933

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 3.4 nTPM; unsited/Cone photoreceptor cells; hpa_single_cell; unresolved; 0.3515 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor for medium-chain aliphatic aldehydes, such as octanal, nonanal and trans-2-decenal (PubMed:41570822). Activated by aliphatic aldehydes with chains ranging from 5 to 11 carbon atoms, with preference for octanal (C8) (PubMed:41570822). Ligand-binding involves the formation of a reversible covalent Schiff base linkage with the aldehyde, causing a conformation change that triggers signaling via G(s)-class of G alpha ... [full text in table]

Curated tissue note. Olfactory epithelium (PubMed:14983052). Also expressed in vascular macrophages, bone marrow-derived macrophages and aortic macrophages (PubMed:35025664)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O95222 | HPA portal (live; not the pinned values)

OR6B1 | Neither / Antibody

ENSG00000221813

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.5 nTPM; pancreas/bulk; hpa_rna_consensus; vital; 0.3 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. pancreatic cancer: 7/9 (77.8%); liver cancer: 7/11 (63.6%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O95007 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR6B2 | Neither / Antibody

ENSG00000182083

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.3 nTPM; retina/bulk; hpa_rna_consensus; vital; 0.5013 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Colon Adenocarcinoma (validation): 1/486 (0.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. melanoma: 1/10 (10.0%); breast cancer: 0/12 (0.0%)

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6IFH4 | HPA portal (live; not the pinned values)

OR6F1 | Neither / Low

ENSG00000169214

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.4 nTPM; eye/muller glia cells; hpa_single_cell_tissue; vital; 0.1616 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGZ6 | HPA portal (live; not the pinned values)

OR6V1 | Neither / Low

ENSG00000225781

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.0091 nTPM; blood/naive CD8 T-cell; hpa_immune_cell_samples; vital; 0.641 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N148 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

OR7D4 | Neither / Low

ENSG00000174667

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.308 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 3.2 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 18/133 (13.5%); Uterine Corpus Endometrial Carcinoma (TCGA): 13/176 (7.4%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 7/283 (2.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor. Selectively activated by androstenone and the related odorous steroid androstadienone

Curated tissue note. Nasal olfactory epithelium

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NG98 | HPA portal (live; not the pinned values)

OR7E24 | Neither / Low

ENSG00000237521

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.0463 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 0.1725 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 32/133 (24.1%); Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6IFN5 | HPA portal (live; not the pinned values)

OR8A1 | Neither / Cellular

ENSG00000196119

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 9.3 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.8 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%); Rectum Adenocarcinoma (validation): 3/207 (1.4%); Kidney Renal Papillary Cell Carcinoma (TCGA): 3/282 (1.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGG7 | HPA portal (live; not the pinned values)

OR8B12 | Neither / Low

ENSG00000170953

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.126 nTPM; blood/gdT-cell; hpa_immune_cell_samples; vital; 0.2941 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGG6 | HPA portal (live; not the pinned values)

OR8B2 | Neither / Unassessed

ENSG00000284680

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.6 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.2534 TPM; blood/TH17; dice_th17; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96RD0 | HPA portal (live; not the pinned values)

OR8B3 | Neither / Unassessed

ENSG00000284609

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.4 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.1464 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGG8 | HPA portal (live; not the pinned values)

OR8D1 | Neither / Antibody

ENSG00000196341

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.4 nTPM; heart muscle/smooth muscle cells; hpa_single_cell_tissue; vital; 0.2142 TPM; blood/eosinophil; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Squamous Cell Carcinoma (TCGA): 1/489 (0.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. colorectal cancer: 2/11 (18.2%); breast cancer: 1/11 (9.1%)

Biology. Odorant receptor (Potential). May be involved in taste perception

Curated tissue note. Expressed in the tongue

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8WZ84 | HPA portal (live; not the pinned values)

OR8G1 | Neither / Low

ENSG00000197849

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.5 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 0.6 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q15617 | HPA portal (live; not the pinned values)

OR8G5 | Neither / Unassessed

ENSG00000255298

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 23.3 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.197 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Lung Adenocarcinoma (validation): 1/105 (1.0%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR8S1 | Neither / Unassessed

ENSG00000284723

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 1.1 nTPM; eye/muller glia cells; hpa_single_cell_tissue; vital; 0.7529 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

OR9Q2 | Neither / Low

ENSG00000186513

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 3.6 nTPM; colon/paneth cells; hpa_single_cell_tissue; protected; 0.1 TPM; blood/Central memory CD8 T-cell; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Odorant receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NGE9 | HPA portal (live; not the pinned values)

OTOG | Neither / Low

ENSG00000188162

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 4.5 nTPM; eye/muller glia cells; hpa_single_cell_tissue; vital; 0.2127 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Kidney Renal Clear Cell Carcinoma (validation): 1/100 (1.0%); Liver Hepatocellular Carcinoma (TCGA): 3/362 (0.8%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Glycoprotein specific to acellular membranes of the inner ear. May be required for the anchoring of the otoconial membranes and cupulae to the underlying neuroepithelia in the vestibule. May be involved in the organization and/or stabilization of the fibrillar network that compose the tectorial membrane in the cochlea. May play a role in mechanotransduction processes (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZRI0 | HPA portal (live; not the pinned values)

OVOL3 | Neither / Cellular

ENSG00000105261

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 10.7 nTPM; salivary gland/plasma cells; hpa_single_cell_tissue; vital; 3.116 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 7/283 (2.5%); Testicular Germ Cell Tumor (TCGA): 3/133 (2.3%); Lung Squamous Cell Carcinoma (TCGA): 8/489 (1.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May act as a transcription regulator

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O00110 | HPA portal (live; not the pinned values)

P3R3URF | Neither / Screening

ENSG00000250719

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 10.5 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 2.505 TPM; blood/NK; dice_nk; vital

Cancer RNA. Kidney Chromophobe (TCGA): 2/64 (3.1%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A087WWA1 | HPA portal (live; not the pinned values)

PADI6 | Neither / Cellular

ENSG00000276747

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 3.7 nTPM; pbmc/t-cells; hpa_single_cell_tissue; vital; 17.78 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 2/207 (1.0%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Structural constituent of cytoplasmic lattices, which plays a key role in early embryonic development (PubMed:37922900, PubMed:41772195). Cytoplasmic lattices consist in fibrous structures found in the cytoplasm of oocytes and preimplantation embryos: they are required to store maternal proteins critical for embryonic development, such as ribosomal proteins, cytoskeletal tubulins and proteins controlling epigenetic reprogramming of the ... [full text in table]

Curated tissue note. Highly expressed in oocytes and weakly expressed in other somatic tissues

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6TGC4 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PAGE3 | Neither / Antibody

ENSG00000204279

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.9 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. cervical cancer: 12/12 (100.0%); endometrial cancer: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5JUK9 | HPA portal (live; not the pinned values)

PAGE5 | Neither / Cellular

ENSG00000158639

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 19.5 nTPM; esophagus/t-cells; hpa_single_cell_tissue; vital; 17.37 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 54/231 (23.4%); Testicular Germ Cell Tumor (TCGA): 31/133 (23.3%); Skin Cuteneous Melanoma (TCGA): 20/99 (20.2%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96GU1 | HPA portal (live; not the pinned values)

PANX3 | Neither / Low

ENSG00000154143

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 3 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 1.177 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Regulator of osteoblast differentiation by functioning as a Ca(2+) channel in the endoplasmic reticulum which regulates calmodulin (CaM) pathways. Allows ATP release into the extracellular space and activation or purinergic receptors

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96QZ0 | HPA portal (live; not the pinned values)

PCDHA13 | Neither / Low

ENSG00000239389

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 7.2 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 0.05634 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Glioblastoma Multiforme (validation): 11/58 (19.0%); Liver Hepatocellular Carcinoma (validation): 28/231 (12.1%); Breast Invasive Carcinoma (validation): 4/50 (8.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Potential calcium-dependent cell-adhesion protein. May be involved in the establishment and maintenance of specific neuronal connections in the brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y5I0 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PCDHA3 | Neither / Low

ENSG00000255408

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 6.5 nTPM; esophagus/endothelial cells; hpa_single_cell_tissue; protected; 0.06938 TPM; blood/NK; dice_nk; vital

Cancer RNA. Glioblastoma Multiforme (validation): 15/58 (25.9%); Breast Invasive Carcinoma (validation): 10/50 (20.0%); Liver Hepatocellular Carcinoma (validation): 30/231 (13.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Potential calcium-dependent cell-adhesion protein. May be involved in the establishment and maintenance of specific neuronal connections in the brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y5H8 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PCDHA7 | Neither / Low

ENSG00000204963

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 7.4 nTPM; lung/ciliated cells; hpa_single_cell_tissue; vital; 0.1838 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 31/231 (13.4%); Breast Invasive Carcinoma (validation): 3/50 (6.0%); Glioblastoma Multiforme (validation): 3/58 (5.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Calcium-dependent cell-adhesion protein involved in cells self-recognition and non-self discrimination. Thereby, it is involved in the establishment and maintenance of specific neuronal connections in the brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9UN72 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PCDHA8 | Neither / Antibody

ENSG00000204962

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.8 nTPM; cerebellum/bulk; hpa_rna_consensus; vital; 0.04619 TPM; blood/TH17; dice_th17; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 29/231 (12.6%); Glioblastoma Multiforme (validation): 6/58 (10.3%); Glioblastoma Multiforme (TCGA): 3/141 (2.1%)

Cancer IHC. prostate cancer: 1/11 (9.1%); breast cancer: 0/9 (0.0%)

Biology. Potential calcium-dependent cell-adhesion protein. May be involved in the establishment and maintenance of specific neuronal connections in the brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y5H6 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PCDHA9 | Neither / Low

ENSG00000204961

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 3.4 nTPM; unsited/Cone photoreceptor cells; hpa_single_cell; unresolved; 0.4736 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 12/58 (20.7%); Liver Hepatocellular Carcinoma (validation): 29/231 (12.6%); Pancreatic Adenocarcinoma (validation): 3/80 (3.8%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Potential calcium-dependent cell-adhesion protein. May be involved in the establishment and maintenance of specific neuronal connections in the brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y5H5 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PCDHB13 | Neither / Cellular

ENSG00000187372

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 9.9 nTPM; skeletal muscle/fibroblasts; hpa_single_cell_tissue; vital; 3.189 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Glioblastoma Multiforme (validation): 57/58 (98.3%); Breast Invasive Carcinoma (validation): 28/50 (56.0%); Pancreatic Adenocarcinoma (validation): 40/80 (50.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Potential calcium-dependent cell-adhesion protein. May be involved in the establishment and maintenance of specific neuronal connections in the brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y5F0 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PCDHB3 | Neither / Antibody

ENSG00000113205

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 6.5 nTPM; esophagus/endothelial cells; hpa_single_cell_tissue; protected; 0.3133 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Glioblastoma Multiforme (validation): 54/58 (93.1%); Breast Invasive Carcinoma (validation): 18/50 (36.0%); Glioblastoma Multiforme (TCGA): 47/141 (33.3%)

Cancer IHC. liver cancer: 2/12 (16.7%); stomach cancer: 1/11 (9.1%)

Biology. Potential calcium-dependent cell-adhesion protein. May be involved in the establishment and maintenance of specific neuronal connections in the brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y5E6 | HPA portal (live; not the pinned values)

PCDHB6 | Neither / Antibody

ENSG00000113211

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.5 nTPM; unsited/Lymphatic endothelial cells; hpa_single_cell; unresolved; 0.3592 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 32/58 (55.2%); Glioblastoma Multiforme (TCGA): 35/141 (24.8%); Breast Invasive Carcinoma (validation): 12/50 (24.0%)

Cancer IHC. breast cancer: 7/12 (58.3%); colorectal cancer: 7/12 (58.3%)

Biology. Calcium-dependent cell-adhesion protein involved in cells self-recognition and non-self discrimination. Thereby, it is involved in the establishment and maintenance of specific neuronal connections in the brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y5E3 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PCDHGA1 | Neither / Antibody

ENSG00000204956

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 6.8 nTPM; unsited/Skeletal myocytes; hpa_single_cell; unresolved; 0.6528 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 180/231 (77.9%); Glioblastoma Multiforme (validation): 43/58 (74.1%); Glioblastoma Multiforme (TCGA): 12/141 (8.5%)

Cancer IHC. breast cancer: 12/12 (100.0%); colorectal cancer: 12/12 (100.0%)

Biology. Potential calcium-dependent cell-adhesion protein. May be involved in the establishment and maintenance of specific neuronal connections in the brain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y5H4 | HPA portal (live; not the pinned values)

PIWIL3 | Neither / Antibody

ENSG00000184571

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.5 nTPM; bone marrow/erythroid cells; hpa_single_cell_tissue; vital; 1.042 TPM; blood/NK; dice_nk; vital

Cancer RNA. Lung Adenocarcinoma (TCGA): 15/497 (3.0%); Bladder Urothelial Carcinoma (TCGA): 4/169 (2.4%); Lung Adenocarcinoma (validation): 1/105 (1.0%)

Cancer IHC. prostate cancer: 11/12 (91.7%); colorectal cancer: 9/12 (75.0%)

Biology. May play a role during spermatogenesis by repressing transposable elements and preventing their mobilization, which is essential for the germline integrity. Acts via the piRNA metabolic process, which mediates the repression of transposable elements during meiosis by forming complexes composed of piRNAs and Piwi proteins and govern the methylation and subsequent repression of transposons. Directly binds piRNAs, a class of 24 to 30 ... [full text in table]

Curated tissue note. Expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7Z3Z3 | HPA portal (live; not the pinned values)

PLA2G2E | Neither / Antibody

ENSG00000188784

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.4 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0.7298 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Thyroid Carcinoma (TCGA): 5/495 (1.0%); Stomach Adenocarcinoma (TCGA): 2/346 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. Secretory calcium-dependent phospholipase A2 that primarily targets extracellular phospholipids (PubMed:10681567, PubMed:11922621, PubMed:28883454). Hydrolyzes the ester bond of the fatty acyl group attached at sn-2 position of phospholipids (phospholipase A2 activity), releasing various unsaturated fatty acids including oleoate, linoleoate, arachidonate, docosahexaenoate and lysophosphatidylethanolamines in preference to ... [full text in table]

Curated tissue note. Restricted to the brain, heart, lung, and placenta

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9NZK7 | HPA portal (live; not the pinned values)

PLSCR2 | Neither / Cellular

ENSG00000163746

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 3.7 nTPM; placenta/mixed immune cells; hpa_single_cell_tissue; vital; 10.1 TPM; blood/neutrophil; hpa_immune_monaco; vital

Cancer RNA. Colon Adenocarcinoma (validation): 12/486 (2.5%); Glioblastoma Multiforme (validation): 1/58 (1.7%); Lung Squamous Cell Carcinoma (validation): 1/68 (1.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May catalyze calcium-induced ATP-independent rapid bidirectional and non-specific movement of phospholipids (lipid scrambling or lipid flip-flop) between the inner and outer leaflet of the plasma membrane Has no phospholipid scramblase activity, due to the lack of a N-terminal proline-rich domain

Curated tissue note. Expression of isoform 1 seems restricted to testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9NRY7 | HPA portal (live; not the pinned values)

PMIS2 | Neither / Low

ENSG00000283758

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 1.037 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in spermatozoa mobility

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1W2PS18 | HPA portal (live; not the pinned values)

PNMA6E | Neither / Screening

ENSG00000214897

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.6 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.2129 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 8/176 (4.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 6/283 (2.1%); Head and Neck Squamous Cell Carcinoma (TCGA): 10/492 (2.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A0J9YXQ4 | HPA portal (live; not the pinned values)

POM121L2 | Neither / Antibody

ENSG00000158553

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.4 nTPM; eye/muller glia cells; hpa_single_cell_tissue; vital; 0.3263 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. prostate cancer: 12/12 (100.0%); lung cancer: 11/11 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96KW2 | HPA portal (live; not the pinned values)

POTEA | Neither / Unassessed

ENSG00000188877

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 1.2 nTPM; unsited/Astrocytes; hpa_single_cell; unresolved; 0.3358 TPM; blood/TH17; dice_th17; vital

Cancer RNA. No exact-ID RNA coverage in the HPA cancer snapshot

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

POTEB | Neither / Low

ENSG00000233917

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A0A6YYL3 | UniProt H3BUK9 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

POTEB2 | Neither / Low

ENSG00000230031

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A0A6YYL3 | UniProt H3BUK9 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

POTEB3 | Neither / Low

ENSG00000278522

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.8 nTPM; placenta/t-cells; hpa_single_cell_tissue; vital; 0.6 TPM; blood/Central memory CD8 T-cell; hpa_immune_monaco; vital

Cancer RNA. Prostate Adenocarcinoma (TCGA): 9/480 (1.9%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0JP26 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

POTEC | Neither / Low

ENSG00000183206

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.6 nTPM; skeletal muscle/fibroblasts; hpa_single_cell_tissue; vital; 0.4605 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 4/50 (8.0%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Expressed in prostate and testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt B2RU33 | HPA portal (live; not the pinned values)

POTED | Neither / Low

ENSG00000166351

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.225 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 0.7816 TPM; blood/basophil; hpa_immune_cell_samples; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 1/50 (2.0%); Breast Invasive Carcinoma (TCGA): 1/1022 (0.1%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Expressed in prostate, ovary, testis, placenta and prostate cancer cell lines. Localizes to basal and terminal prostate epithelial cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q86YR6 | HPA portal (live; not the pinned values)

POTEF | Neither / Antibody

ENSG00000196604

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 4.401 nTPM; blood/total PBMC; hpa_immune_cell_samples; vital; 1.267 TPM; blood/total PBMC; hpa_immune_cell_samples; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 5/50 (10.0%); Colon Adenocarcinoma (validation): 46/486 (9.5%); Rectum Adenocarcinoma (validation): 18/207 (8.7%)

Cancer IHC. testis cancer: 12/12 (100.0%); endometrial cancer: 11/11 (100.0%)

Biology. Expressed in breast cancer cell lines (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A5A3E0 | HPA portal (live; not the pinned values)

POTEH | Neither / Low

ENSG00000198062

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.4 nTPM; adipose tissue/b-cells; hpa_single_cell_tissue; vital; 0.1284 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Prostate Adenocarcinoma (TCGA): 2/480 (0.4%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6S545 | HPA portal (live; not the pinned values)

POTEI | Neither / Antibody

ENSG00000196834

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.4 nTPM; colon/distal enterocytes; hpa_single_cell_tissue; protected; 0.5681 TPM; blood/NK; dice_nk; vital

Cancer RNA. Prostate Adenocarcinoma (TCGA): 109/480 (22.7%); Breast Invasive Carcinoma (TCGA): 82/1022 (8.0%); Pancreatic Adenocarcinoma (validation): 5/80 (6.2%)

Cancer IHC. testis cancer: 12/12 (100.0%); endometrial cancer: 11/11 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0CG38 | HPA portal (live; not the pinned values)

POU4F2 | Neither / Low

ENSG00000151615

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 4.6 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 0.2217 TPM; blood/MONOCYTES; dice_monocytes; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Tissue-specific DNA-binding transcription factor involved in the development and differentiation of target cells (PubMed:19266028, PubMed:23805044). Functions either as activator or repressor modulating the rate of target gene transcription through RNA polymerase II enzyme in a promoter-dependent manner (PubMed:19266028, PubMed:23805044). Binds to the consensus octamer motif 5'-AT[A/T]A[T/A]T[A/T]A-3' of promoter of target genes. Plays ... [full text in table]

Curated tissue note. Expressed in the brain (PubMed:7691107). Expressed in the ganglion cell layer of the retina (PubMed:7691107)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q12837 | HPA portal (live; not the pinned values)

PP2D1 | Neither / Cellular

ENSG00000183977

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 2.5 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 24.21 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 152/231 (65.8%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. testis cancer: 1/11 (9.1%); colorectal cancer: 1/12 (8.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A8MPX8 | HPA portal (live; not the pinned values)

PPP3R2 | Neither / Antibody

ENSG00000188386

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 10.5 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 1.279 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. renal cancer: 8/12 (66.7%); endometrial cancer: 7/12 (58.3%)

Biology. Regulatory subunit of calcineurin, a calcium-dependent, calmodulin stimulated protein phosphatase. Confers calcium sensitivity

Curated tissue note. Testis-specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96LZ3 | HPA portal (live; not the pinned values)

PPP4R3C | Neither / Low

ENSG00000224960

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.1668 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 14/133 (10.5%); Liver Hepatocellular Carcinoma (TCGA): 16/362 (4.4%); Lung Squamous Cell Carcinoma (validation): 2/68 (2.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZMV5 | HPA portal (live; not the pinned values)

PRAMEF1 | Neither / Low

ENSG00000116721

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O95521 | HPA portal (live; not the pinned values)

PRAMEF11 | Neither / Low

ENSG00000239810

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.0027 nTPM; blood/plasmacytoid DC; hpa_immune_cell_samples; vital; 0.0027 TPM; blood/plasmacytoid DC; hpa_immune_cell_samples; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (validation): 1/81 (1.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O60813 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRAMEF12 | Neither / Unassessed

ENSG00000116726

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.2 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.0148 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. colorectal cancer: 12/12 (100.0%); skin cancer: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O95522 | HPA portal (live; not the pinned values)

PRAMEF13 | Neither / Low

ENSG00000279169

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.0075 nTPM; blood/naive B-cell; hpa_immune_cell_samples; vital; 0.006 TPM; blood/naive B-cell; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5VWM6 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRAMEF14 | Neither / Low

ENSG00000204481

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; endometrium/macrophages; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Liver Hepatocellular Carcinoma (TCGA): 1/362 (0.3%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5SWL7 | HPA portal (live; not the pinned values)

PRAMEF15 | Neither / Low

ENSG00000204501

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; liver/bulk; hpa_rna_consensus; vital; 0.0069 TPM; blood/naive B-cell; hpa_immune_cell_samples; vital

Cancer RNA. Liver Hepatocellular Carcinoma (TCGA): 27/362 (7.5%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Substrate-recognition component of a Cul2-RING (CRL2) E3 ubiquitin-protein ligase complex, which mediates ubiquitination of target proteins, leading to their degradation (PubMed:26138980). The CRL2(PRAMEF9) complex mediates ubiquitination and degradation of truncated MSRB1/SEPX1 selenoproteins produced by failed UGA/Sec decoding (PubMed:26138980)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DUQ2 | UniProt P0DUQ1 | HPA portal (live; not the pinned values)

PRAMEF19 | Neither / Antibody

ENSG00000204480

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.4 nTPM; bone marrow/bulk; hpa_rna_consensus; vital; 0.2 TPM; blood/Memory CD4 T-cell Th2; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 1/1022 (0.1%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. colorectal cancer: 3/12 (25.0%); melanoma: 1/11 (9.1%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5SWL8 | HPA portal (live; not the pinned values)

PRAMEF2 | Neither / Low

ENSG00000120952

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.3659 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Liver Hepatocellular Carcinoma (TCGA): 2/362 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Liver Hepatocellular Carcinoma (validation): 1/231 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O60811 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRAMEF20 | Neither / Low

ENSG00000204478

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.4416 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5VT98 | HPA portal (live; not the pinned values)

PRAMEF27 | Neither / Low

ENSG00000274764

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.3267 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A3QJZ7 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRAMEF4 | Neither / Low

ENSG00000243073

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.0109 nTPM; blood/total PBMC; hpa_immune_cell_samples; vital; 0.0041 TPM; blood/total PBMC; hpa_immune_cell_samples; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 16/231 (6.9%); Liver Hepatocellular Carcinoma (TCGA): 20/362 (5.5%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O60810 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRAMEF5 | Neither / Low

ENSG00000270601

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5TYX0 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRAMEF6 | Neither / Low

ENSG00000232423

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Head and Neck Squamous Cell Carcinoma (TCGA): 1/492 (0.2%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Substrate-recognition component of a Cul2-RING (CRL2) E3 ubiquitin-protein ligase complex, which mediates ubiquitination of target proteins, leading to their degradation (PubMed:26138980). The CRL2(PRAMEF6) complex mediates ubiquitination and degradation of truncated MSRB1/SEPX1 selenoproteins produced by failed UGA/Sec decoding (PubMed:26138980)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5VXH4 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRDM13 | Neither / Antibody

ENSG00000112238

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 16.4 nTPM; unsited/Horizontal cells; hpa_single_cell; unresolved; 1.833 TPM; blood/NK; dice_nk; vital

Cancer RNA. Glioblastoma Multiforme (validation): 2/58 (3.4%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 7/283 (2.5%); Skin Cuteneous Melanoma (TCGA): 2/99 (2.0%)

Cancer IHC. breast cancer: 0/8 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. May be involved in transcriptional regulation. Is required for the differentiation of KISS1-expressing neurons in the arcuate (Arc) nucleus of the hypothalamus. Is a critical regulator of GABAergic cell fate in the cerebellum, required for normal postnatal cerebellar development (By similarity)

Curated tissue note. In the embryo, expressed in neural stem cells of the hindbrain

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H4Q3 | HPA portal (live; not the pinned values)

PRDM14 | Neither / Antibody

ENSG00000147596

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.3 nTPM; kidney/proximal tubular cells; hpa_single_cell_tissue; vital; 0.697 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 106/133 (79.7%); Uterine Corpus Endometrial Carcinoma (TCGA): 7/176 (4.0%); Glioblastoma Multiforme (validation): 1/58 (1.7%)

Cancer IHC. colorectal cancer: 10/11 (90.9%); pancreatic cancer: 8/10 (80.0%)

Biology. Transcription factor that has both positive and negative roles on transcription. Required for the maintenance of embryonic stem cell identity and the reacquisition of pluripotency in somatic cells. May play an essential role in germ cell development at 2 levels: the reacquisition of potential pluripotency, including SOX2 up-regulation, and successful epigenetic reprogramming, characterized by EHMT1 repression. Its association with ... [full text in table]

Curated tissue note. Expressed in embryonic stem cells. Tends to be overexpressed in breast cancer (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9GZV8 | HPA portal (live; not the pinned values)

PRDM9 | Neither / Antibody

ENSG00000164256

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.254 nTPM; blood/NK-cell; hpa_immune_cell_samples; vital; 3.955 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Lung Squamous Cell Carcinoma (validation): 1/68 (1.5%); Bladder Urothelial Carcinoma (TCGA): 2/169 (1.2%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. Histone methyltransferase that sequentially mono-, di-, and tri-methylates both 'Lys-4' (H3K4) and 'Lys-36' (H3K36) of histone H3 to produce respectively trimethylated 'Lys-4' (H3K4me3) and trimethylated 'Lys-36' (H3K36me3) histone H3 and plays a key role in meiotic prophase by determining hotspot localization thereby promoting meiotic recombination (PubMed:18941885, PubMed:24095733, PubMed:24634223, PubMed:26833727, PubMed:27129774). ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9NQV7 | HPA portal (live; not the pinned values)

PRR20A | Neither / Antibody

ENSG00000204919

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.0027 nTPM; blood/gdT-cell; hpa_immune_cell_samples; vital; 0.003 TPM; blood/gdT-cell; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P86479 | UniProt P86480 | UniProt P86478 | UniProt P86481 | UniProt P86496 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRR20B | Neither / Antibody

ENSG00000204918

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.0027 nTPM; blood/gdT-cell; hpa_immune_cell_samples; vital; 0.003 TPM; blood/gdT-cell; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P86479 | UniProt P86480 | UniProt P86478 | UniProt P86481 | UniProt P86496 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRR20C | Neither / Antibody

ENSG00000229665

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.0054 nTPM; blood/gdT-cell; hpa_immune_cell_samples; vital; 0.006 TPM; blood/gdT-cell; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P86479 | UniProt P86480 | UniProt P86478 | UniProt P86481 | UniProt P86496 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRR20D | Neither / Antibody

ENSG00000227151

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.0027 nTPM; blood/gdT-cell; hpa_immune_cell_samples; vital; 0.003 TPM; blood/gdT-cell; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P86479 | UniProt P86480 | UniProt P86478 | UniProt P86481 | UniProt P86496 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRR20E | Neither / Antibody

ENSG00000234278

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.0027 nTPM; blood/gdT-cell; hpa_immune_cell_samples; vital; 0.003 TPM; blood/gdT-cell; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P86479 | UniProt P86480 | UniProt P86478 | UniProt P86481 | UniProt P86496 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRR20G | Neither / Unassessed

ENSG00000239620

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 1.1 nTPM; pancreas/mixed cell types; hpa_single_cell_tissue; vital; 1.001 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 23/133 (17.3%); Stomach Adenocarcinoma (TCGA): 17/346 (4.9%); Uterine Corpus Endometrial Carcinoma (TCGA): 8/176 (4.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DPQ3 | HPA portal (live; not the pinned values)

PRR23A | Neither / Antibody

ENSG00000206260

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1 nTPM; skin/endothelial cells; hpa_single_cell_tissue; manageable; 1.3 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 13/133 (9.8%); Bladder Urothelial Carcinoma (TCGA): 5/169 (3.0%); Uterine Corpus Endometrial Carcinoma (TCGA): 5/176 (2.8%)

Cancer IHC. melanoma: 1/11 (9.1%); liver cancer: 1/12 (8.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NEV1 | HPA portal (live; not the pinned values)

PRR23B | Neither / Antibody

ENSG00000184814

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. melanoma: 1/11 (9.1%); liver cancer: 1/12 (8.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZRT6 | HPA portal (live; not the pinned values)

PRR23C | Neither / Antibody

ENSG00000233701

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.212 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 1.291 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 7/176 (4.0%); Testicular Germ Cell Tumor (TCGA): 4/133 (3.0%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. melanoma: 1/11 (9.1%); liver cancer: 1/12 (8.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZRP0 | HPA portal (live; not the pinned values)

PRR23D1 | Neither / Screening

ENSG00000255251

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.8328 nTPM; blood/T-reg; hpa_immune_cell_samples; vital; 0.7185 TPM; blood/T-reg; hpa_immune_cell_samples; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Squamous Cell Carcinoma (TCGA): 2/489 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt E9PI22 | UniProt P0DMB1 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRR23D2 | Neither / Low

ENSG00000255378

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; basal ganglia/bulk; hpa_rna_consensus; vital; 0.2 TPM; blood/NK-cell; hpa_immune_monaco; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Squamous Cell Carcinoma (TCGA): 2/489 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt E9PI22 | UniProt P0DMB1 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

PRR23E | Neither / Unassessed

ENSG00000214324

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 2.5 nTPM; skeletal muscle/fibroblasts; hpa_single_cell_tissue; vital; 0.3988 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 6/133 (4.5%); Stomach Adenocarcinoma (TCGA): 2/346 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N813 | HPA portal (live; not the pinned values)

PRSS38 | Neither / Low

ENSG00000185888

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.8 nTPM; adipose tissue/t-cells; hpa_single_cell_tissue; vital; 2.335 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Kidney Renal Papillary Cell Carcinoma (TCGA): 2/282 (0.7%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A1L453 | HPA portal (live; not the pinned values)

PRSS41 | Neither / Cellular

ENSG00000215148

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 16.54 nTPM; blood/eosinophil; hpa_immune_cell_samples; vital; 12.64 TPM; blood/eosinophil; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 17/133 (12.8%); Pancreatic Adenocarcinoma (TCGA): 8/176 (4.5%); Stomach Adenocarcinoma (TCGA): 14/346 (4.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

PSMA8 | Neither / Cellular

ENSG00000154611

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 8.5 nTPM; liver/plasma cells; hpa_single_cell_tissue; vital; 7.842 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 3/231 (1.3%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Component of the spermatoproteasome, a proteasome specifically found in testis that promotes acetylation-dependent degradation of histones, thereby participating actively to the exchange of histones during spermatogenesis. The proteasome is a protein complex that degrades unneeded or damaged proteins by proteolysis, a chemical reaction that breaks peptide bonds. Required for 20S core proteasome assembly, essential for the degradation ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8TAA3 | HPA portal (live; not the pinned values)

PTH2 | Neither / Low

ENSG00000142538

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 10.2 nTPM; colon/undifferentiated cells; hpa_single_cell_tissue; protected; 1.825 TPM; blood/naive B-cell; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Plays a role as a potent and selective agonist of PTH2R resulting in adenyl cyclase activation and intracellular calcium levels elevation. Induces protein kinase C beta activation, recruitment of beta-arrestin and PTH2R internalization. May inhibit cell proliferation via its action on PTH2R activation. Neuropeptide which may also have a role in spermatogenesis. May activate nociceptors and nociceptive circuits

Curated tissue note. Highly expressed in fetal and adult brain, cerebellum and trachea. Weakly expressed in spinal cord, fetal liver, kidney and heart

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96A98 | HPA portal (live; not the pinned values)

PXT1 | Neither / Low

ENSG00000179165

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 5.7 nTPM; fallopian tube/neutrophils; hpa_single_cell_tissue; vital; 1.86 TPM; blood/MONOCYTES; dice_monocytes; vital

Cancer RNA. Kidney Chromophobe (TCGA): 1/64 (1.6%); Bladder Urothelial Carcinoma (TCGA): 2/169 (1.2%); Kidney Renal Papillary Cell Carcinoma (TCGA): 3/282 (1.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NFP0 | HPA portal (live; not the pinned values)

RBAK-RBAKDN | Neither / Screening

ENSG00000272968

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.6 nTPM; skeletal muscle/fibroblasts; hpa_single_cell_tissue; vital; 1.5 TPM; blood/Non-Vd2 gdTCR; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 27/133 (20.3%); Skin Cuteneous Melanoma (TCGA): 16/99 (16.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 22/176 (12.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May repress E2F-dependent transcription. May promote AR-dependent transcription

Curated tissue note. Expressed in bone, brain, heart, kidney, liver, lung, pancreas and placenta

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9NYW8 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

RBAKDN | Neither / Unassessed

ENSG00000273313

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 6.121 TPM; blood/NK; dice_nk; vital

Cancer RNA. No exact-ID RNA coverage in the HPA cancer snapshot

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NC62 | HPA portal (live; not the pinned values)

RBM44 | Neither / Cellular

ENSG00000177483

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 6.4 nTPM; skeletal muscle/fibroblasts; hpa_single_cell_tissue; vital; 14.93 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 3/80 (3.8%); Glioblastoma Multiforme (validation): 2/58 (3.4%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. Component of intercellular bridges during meiosis. Intercellular bridges are evolutionarily conserved structures that connect differentiating germ cells. Not required for fertility (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZP01 | HPA portal (live; not the pinned values)

RFPL4AL1 | Neither / Antibody

ENSG00000229292

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 16 nTPM; adipose tissue/schwann cells; hpa_single_cell_tissue; manageable; 4.059 TPM; blood/classical monocyte; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 11/133 (8.3%); Liver Hepatocellular Carcinoma (TCGA): 5/362 (1.4%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%)

Cancer IHC. colorectal cancer: 12/12 (100.0%); endometrial cancer: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt F8VTS6 | HPA portal (live; not the pinned values)

RFPL4B | Neither / Antibody

ENSG00000251258

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 4.8 nTPM; skin/granulocytes; hpa_single_cell_tissue; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 21/133 (15.8%); Liver Hepatocellular Carcinoma (validation): 27/231 (11.7%); Liver Hepatocellular Carcinoma (TCGA): 26/362 (7.2%)

Cancer IHC. colorectal cancer: 9/12 (75.0%); pancreatic cancer: 5/11 (45.5%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZWI9 | HPA portal (live; not the pinned values)

RGPD3 | Neither / Antibody

ENSG00000153165

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 4.8 nTPM; skin/granulocytes; hpa_single_cell_tissue; vital; 1.204 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Lung Squamous Cell Carcinoma (validation): 1/68 (1.5%); Pancreatic Adenocarcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. liver cancer: 5/11 (45.5%); melanoma: 3/10 (30.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NKT7 | HPA portal (live; not the pinned values)

RGPD4 | Neither / Antibody

ENSG00000196862

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.7 nTPM; lymph node/b-cells; hpa_single_cell_tissue; vital; 0.681 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 12/50 (24.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. liver cancer: 5/11 (45.5%); melanoma: 3/10 (30.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7Z3J3 | HPA portal (live; not the pinned values)

RGSL1 | Neither / Low

ENSG00000121446

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.2 nTPM; pancreas/exocrine glandular cells; hpa_single_cell_tissue; vital; 0.442 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 21/231 (9.1%); Pancreatic Adenocarcinoma (validation): 5/80 (6.2%); Liver Hepatocellular Carcinoma (TCGA): 4/362 (1.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A5PLK6 | HPA portal (live; not the pinned values)

RIMBP3B | Neither / Screening

ENSG00000274600

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.5 nTPM; bone marrow/t-cells; hpa_single_cell_tissue; vital; 1.5 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 207/207 (100.0%); Colon Adenocarcinoma (validation): 485/486 (99.8%); Colon Adenocarcinoma (TCGA): 6/254 (2.4%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. Probable component of the manchette, a microtubule-based structure which plays a key role in sperm head morphogenesis during late stages of sperm development

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NNM3 | HPA portal (live; not the pinned values)

RNASE11 | Neither / Antibody

ENSG00000173464

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.5 nTPM; colon/distal enterocytes; hpa_single_cell_tissue; protected; 0.1328 TPM; blood/NK; dice_nk; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Kidney Renal Papillary Cell Carcinoma (TCGA): 2/282 (0.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. colorectal cancer: 11/11 (100.0%); prostate cancer: 10/11 (90.9%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8TAA1 | HPA portal (live; not the pinned values)

RTL9 | Neither / Cellular

ENSG00000243978

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 9.2 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.1354 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Kidney Chromophobe (TCGA): 4/64 (6.2%); Glioblastoma Multiforme (validation): 3/58 (5.2%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. pancreatic cancer: 1/11 (9.1%); prostate cancer: 1/11 (9.1%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NET4 | HPA portal (live; not the pinned values)

RTP2 | Neither / Low

ENSG00000198471

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.9 nTPM; skeletal muscle/bulk; hpa_rna_consensus; vital; 0.5173 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Kidney Chromophobe (TCGA): 12/64 (18.8%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Specifically promotes functional cell surface expression of olfactory receptors, but not of other GPCRs

Curated tissue note. Expressed in circumvallate papillae and testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5QGT7 | HPA portal (live; not the pinned values)

SAXO5 | Neither / Cellular

ENSG00000198723

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 28.3 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 15.78 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 16/207 (7.7%); Colon Adenocarcinoma (validation): 25/486 (5.1%); Uterine Corpus Endometrial Carcinoma (TCGA): 5/176 (2.8%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Highly expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NA69 | HPA portal (live; not the pinned values)

SCAND3 | Neither / Antibody

ENSG00000232040

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 19.2 nTPM; prostate/t-cells; hpa_single_cell_tissue; vital; 2.049 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Glioblastoma Multiforme (validation): 30/58 (51.7%); Prostate Adenocarcinoma (TCGA): 57/480 (11.9%); Uterine Corpus Endometrial Carcinoma (TCGA): 6/176 (3.4%)

Cancer IHC. breast cancer: 12/12 (100.0%); cervical cancer: 12/12 (100.0%)

Biology. Weakly expressed in the lung (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6R2W3 | HPA portal (live; not the pinned values)

SCGB1D1 | Neither / Low

ENSG00000168515

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.2 nTPM; unsited/Secretory cells; hpa_single_cell; unresolved; 0.5948 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (TCGA): 117/349 (33.5%); Ovary Serous Cystadenocarcinoma (validation): 26/81 (32.1%); Uterine Corpus Endometrial Carcinoma (TCGA): 30/176 (17.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May bind androgens and other steroids, may also bind estramustine, a chemotherapeutic agent used for prostate cancer. May be under transcriptional regulation of steroid hormones

Curated tissue note. Expressed in lachrymal gland, thymus, kidney, testis, ovary and salivary gland

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O95968 | HPA portal (live; not the pinned values)

SCN10A | Neither / Low

ENSG00000185313

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1 nTPM; heart muscle/cardiomyocytes; hpa_single_cell_tissue; vital; 0.06792 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Tetrodotoxin-resistant channel that mediates the voltage-dependent sodium ion permeability of excitable membranes. Assuming opened or closed conformations in response to the voltage difference across the membrane, the protein forms a sodium-selective channel through which sodium ions may pass in accordance with their electrochemical gradient. Plays a role in neuropathic pain mechanisms

Curated tissue note. Expressed in the dorsal root ganglia and sciatic nerve

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y5Y9 | HPA portal (live; not the pinned values)

SERPINA2 | Neither / Unassessed

ENSG00000258597

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 3.322 nTPM; blood/intermediate monocyte; hpa_immune_cell_samples; vital; 2.91 TPM; blood/M2; dice_m2; vital

Cancer RNA. No exact-ID RNA coverage in the HPA cancer snapshot

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

SKIDA1 | Neither / Antibody

ENSG00000180592

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 24.3 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 0.7 TPM; blood/plasmacytoid DC; hpa_immune_monaco; vital

Cancer RNA. Glioblastoma Multiforme (validation): 15/58 (25.9%); Testicular Germ Cell Tumor (TCGA): 13/133 (9.8%); Ovary Serous Cystadenocarcinoma (TCGA): 11/349 (3.2%)

Cancer IHC. pancreatic cancer: 1/11 (9.1%); breast cancer: 0/12 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q1XH10 | HPA portal (live; not the pinned values)

SKOR2 | Neither / Antibody

ENSG00000215474

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.1 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 0.1098 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Glioblastoma Multiforme (TCGA): 3/141 (2.1%); Thyroid Carcinoma (TCGA): 6/495 (1.2%); Ovary Serous Cystadenocarcinoma (TCGA): 3/349 (0.9%)

Cancer IHC. colorectal cancer: 3/12 (25.0%); stomach cancer: 1/8 (12.5%)

Biology. Has transcriptional corepressor activity. In the developing cerebellum, it down-regulates BMP signaling resulting in up-regulation of SHH expression in Purkinje cells and promoting their early differentiation. It is also involved in regulating the proliferation of cerebellar granule cell precursors

Curated tissue note. Expressed in cerebellum, spinal cord and testis. Isoform 2 is present in cerebellum (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q2VWA4 | HPA portal (live; not the pinned values)

SLC24A5 | Neither / Cellular

ENSG00000188467

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 8.7 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 0.4479 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 94/99 (94.9%); Breast Invasive Carcinoma (validation): 41/50 (82.0%); Uterine Corpus Endometrial Carcinoma (TCGA): 72/176 (40.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Calcium, potassium:sodium antiporter that transports 1 Ca(2+) and 1 K(+) to the melanosome in exchange for 4 cytoplasmic Na(+) (PubMed:18166528). Involved in pigmentation, possibly by participating in ion transport in melanosomes (PubMed:16357253, PubMed:18166528). Predominant sodium-calcium exchanger in melanocytes (PubMed:16357253, PubMed:18166528)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q71RS6 | HPA portal (live; not the pinned values)

SLC25A2 | Neither / Antibody

ENSG00000120329

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 3.361 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. liver cancer: 8/11 (72.7%); prostate cancer: 4/10 (40.0%)

Biology. Mitochondrial transporter of the positively charged amino acids ornithine, lysine and arginine, and the neutral amino acid citrulline (PubMed:12807890). In addition, transports the basic amino acids histidine, homoarginine, and asymmetric dimethylarginine (aDMA), but not symmetric DMA, and the D-forms of lysine, arginine, ornithine and histidine (PubMed:12807890, PubMed:26403849). Functions by both counter-exchange and uniport ... [full text in table]

Curated tissue note. Expressed in liver, testis, spleen, lung, pancreas, and small intestine and expressed poorly in other tissues

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9BXI2 | HPA portal (live; not the pinned values)

SLC25A52 | Neither / Antibody

ENSG00000141437

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.2 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 4.791 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. endometrial cancer: 3/12 (25.0%); breast cancer: 2/12 (16.7%)

Biology. Mitochondrial membrane carrier protein that mediates the import of NAD(+) into mitochondria (PubMed:32906142). Compared to SLC25A51, SLC25A52-mediated transport is not essential for the import of NAD(+) in mitochondria (PubMed:32906142). The transport mechanism, uniport or antiport, its electrogenicity and substrate selectivity, remain to be elucidated

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q3SY17 | HPA portal (live; not the pinned values)

SLC26A8 | Neither / Cellular

ENSG00000112053

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 25.3 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 11.8 TPM; blood/neutrophil; hpa_immune_monaco; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 5/80 (6.2%); Breast Invasive Carcinoma (validation): 1/50 (2.0%); Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%)

Cancer IHC. breast cancer: 1/10 (10.0%); cervical cancer: 0/12 (0.0%)

Biology. Antiporter that mediates the exchange of sulfate and oxalate against chloride ions across a membrane (PubMed:11278976, PubMed:11834742). Stimulates anion transport activity of CFTR (PubMed:22121115, PubMed:23582645). May cooperate with CFTR in the regulation of chloride and bicarbonate ions fluxes required for activation of the ADCY10/PKA pathway during sperm motility and sperm capacitation (By similarity). May play a role in sperm ... [full text in table]

Curated tissue note. Expression observed exclusively in testis, restricted to the meiotic phase of the germ cell (PubMed:11834742). Abundant expression located in the seminiferous tubules, concentrated on the luminal side of the ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96RN1 | HPA portal (live; not the pinned values)

SLC35G3 | Neither / Low

ENSG00000164729

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 4.3 nTPM; heart muscle/cardiomyocytes; hpa_single_cell_tissue; vital; 4.406 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 4/133 (3.0%); Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Testis-specific UDP-N-acetylglucosamine transporter that mediates transport of nucleotide sugars to facilitate the proper glycosylation of proteins critical for sperm function

Curated tissue note. Expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N808 | HPA portal (live; not the pinned values)

SLC35G4 | Neither / Low

ENSG00000236396

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0.3105 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Mediates choline transport, although the underlying transport mechanism remains to be elucidated

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0C7Q5 | HPA portal (live; not the pinned values)

SLC45A2 | Neither / Low

ENSG00000164175

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 10.3 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 1.313 TPM; blood/NK; dice_nk; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 93/99 (93.9%); Prostate Adenocarcinoma (TCGA): 70/480 (14.6%); Liver Hepatocellular Carcinoma (validation): 17/231 (7.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Proton-associated glucose and sucrose transporter (By similarity). May be able to transport also fructose (By similarity). Expressed at a late melanosome maturation stage where functions as proton/glucose exporter which increase lumenal pH by decreasing glycolysis (PubMed:32966160, PubMed:35469906). Regulates melanogenesis by maintaining melanosome neutralization that is initially initiated by transient OCA2 and required for a proper ... [full text in table]

Curated tissue note. Expressed in mature melanocytes

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9UMX9 | HPA portal (live; not the pinned values)

SLC6A5 | Neither / Low

ENSG00000165970

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.9 nTPM; lung/bulk; hpa_rna_consensus; vital; 0.0824 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Lung Adenocarcinoma (validation): 1/105 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Ovary Serous Cystadenocarcinoma (TCGA): 1/349 (0.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Sodium- and chloride-dependent glycine transporter (PubMed:10381548, PubMed:10606742, PubMed:16751771, PubMed:31370103, PubMed:9845349). Terminates the action of glycine by its high affinity sodium-dependent reuptake into presynaptic terminals (PubMed:9845349). May be responsible for the termination of neurotransmission at strychnine-sensitive glycinergic synapses (PubMed:9845349) Lacks sodium- and chloride-dependent glycine ... [full text in table]

Curated tissue note. Expressed in medulla, and to a lesser extent in spinal cord and cerebellum

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y345 | HPA portal (live; not the pinned values)

SLFNL1 | Neither / Cellular

ENSG00000171790

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 6.5 nTPM; lung/alveolar cells type 2; hpa_single_cell_tissue; vital; 9.185 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 4/50 (8.0%); Lung Adenocarcinoma (TCGA): 29/497 (5.8%); Kidney Renal Papillary Cell Carcinoma (TCGA): 16/282 (5.7%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q499Z3 | HPA portal (live; not the pinned values)

SMIM10L2B-AS1 | Neither / Unassessed

ENSG00000228372

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 1.143 TPM; blood/NK; dice_nk; vital

Cancer RNA. No exact-ID RNA coverage in the HPA cancer snapshot

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

SMIM47 | Neither / Cellular

ENSG00000261341

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 17.4 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 6.766 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (TCGA): 15/349 (4.3%); Skin Cuteneous Melanoma (TCGA): 2/99 (2.0%); Rectum Adenocarcinoma (validation): 4/207 (1.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt D0EPY3 | HPA portal (live; not the pinned values)

SPACA5B | Neither / Screening

ENSG00000171478

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 2.004 nTPM; blood/T-reg; hpa_immune_cell_samples; vital; 2.313 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/10 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96QH8 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

SPANXN1 | Neither / Low

ENSG00000203923

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.2 nTPM; pancreas/exocrine glandular cells; hpa_single_cell_tissue; vital; 0.751 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5VSR9 | HPA portal (live; not the pinned values)

SPANXN2 | Neither / Low

ENSG00000268988

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 1/1022 (0.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5MJ10 | HPA portal (live; not the pinned values)

SPANXN4 | Neither / Antibody

ENSG00000189326

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.097 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 1.74 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. breast cancer: 12/12 (100.0%); melanoma: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5MJ08 | HPA portal (live; not the pinned values)

SPATA31A3 | Neither / Low

ENSG00000275969

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.0012 nTPM; blood/NK-cell; hpa_immune_cell_samples; vital; 0.0012 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Squamous Cell Carcinoma (TCGA): 1/489 (0.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in spermatogenesis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5VYP0 | HPA portal (live; not the pinned values)

SPATA31A5 | Neither / Low

ENSG00000276581

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.0005 nTPM; blood/NK-cell; hpa_immune_cell_samples; vital; 0.1 TPM; blood/neutrophil; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in spermatogenesis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5VU36 | HPA portal (live; not the pinned values)

SPATA31A6 | Neither / Low

ENSG00000185775

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.0028 TPM; blood/myeloid DC; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in spermatogenesis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5VVP1 | HPA portal (live; not the pinned values)

SPATA31A7 | Neither / Low

ENSG00000276040

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; skeletal muscle/endothelial cells; hpa_single_cell_tissue; vital; 0.1772 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in spermatogenesis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IWB4 | HPA portal (live; not the pinned values)

SPATA31C1 | Neither / Unassessed

ENSG00000230246

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 2.2 nTPM; bone marrow/erythroid cells; hpa_single_cell_tissue; vital; 0.7527 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. No exact-ID RNA coverage in the HPA cancer snapshot

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in spermatogenesis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DKV0 | HPA portal (live; not the pinned values)

SPATA31C2 | Neither / Unassessed

ENSG00000177910

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 1.866 nTPM; blood/T-reg; hpa_immune_cell_samples; vital; 1.871 TPM; blood/T-reg; hpa_immune_cell_samples; vital

Cancer RNA. No exact-ID RNA coverage in the HPA cancer snapshot

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a role in spermatogenesis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt B4DYI2 | HPA portal (live; not the pinned values)

SPATA31D1 | Neither / Antibody

ENSG00000214929

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.2 nTPM; prostate/t-cells; hpa_single_cell_tissue; vital; 0.04195 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. colorectal cancer: 11/12 (91.7%); pancreatic cancer: 9/11 (81.8%)

Biology. May play a role in spermatogenesis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZQQ2 | HPA portal (live; not the pinned values)

SPATA31F3 | Neither / Screening

ENSG00000187791

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 8.5 nTPM; unsited/Cone photoreceptor cells; hpa_single_cell; unresolved; 0.4089 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Lung Squamous Cell Carcinoma (validation): 1/68 (1.5%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Lung Squamous Cell Carcinoma (TCGA): 3/489 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NFA0 | HPA portal (live; not the pinned values)

SPATA31H1 | Neither / Antibody

ENSG00000221843

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 8.4 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 1.335 TPM; blood/M2; dice_m2; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 2/50 (4.0%); Liver Hepatocellular Carcinoma (validation): 9/231 (3.9%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. lymphoma: 1/11 (9.1%); testis cancer: 1/11 (9.1%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

SPATA31J1 | Neither / Unassessed

ENSG00000204661

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.863 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. No exact-ID RNA coverage in the HPA cancer snapshot

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NFR6 | HPA portal (live; not the pinned values)

SPATA32 | Neither / Cellular

ENSG00000184361

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 2.9 nTPM; unsited/Skeletal myocytes; hpa_single_cell; unresolved; 11.1 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 3/169 (1.8%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 5/283 (1.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%)

Cancer IHC. pancreatic cancer: 6/12 (50.0%); breast cancer: 3/10 (30.0%)

Biology. Detected in testis, and on the acrosomal cap of spermatids

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96LK8 | HPA portal (live; not the pinned values)

SPDYE1 | Neither / Cellular

ENSG00000136206

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 13 nTPM; heart muscle/endothelial cells; hpa_single_cell_tissue; vital; 9.7 TPM; blood/naive CD4 T-cell; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 166/207 (80.2%); Colon Adenocarcinoma (validation): 352/486 (72.4%); Stomach Adenocarcinoma (TCGA): 26/346 (7.5%)

Cancer IHC. breast cancer: 0/10 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. Predominantly expressed in testis and heart

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NFV5 | HPA portal (live; not the pinned values)

SPDYE3 | Neither / Cellular

ENSG00000214300

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 16.2 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 20.03 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 46/50 (92.0%); Ovary Serous Cystadenocarcinoma (validation): 24/81 (29.6%); Liver Hepatocellular Carcinoma (validation): 8/231 (3.5%)

Cancer IHC. breast cancer: 0/10 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. Predominantly expressed in testis and spleen

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NKU9 | HPA portal (live; not the pinned values)

SPEM2 | Neither / Antibody

ENSG00000184560

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 9.9 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.6683 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Colon Adenocarcinoma (validation): 1/486 (0.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. ovarian cancer: 8/12 (66.7%); colorectal cancer: 6/12 (50.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q0P670 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

SPEM3 | Neither / Screening

ENSG00000283439

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.2 nTPM; liver/hepatocytes; hpa_single_cell_tissue; vital; 0.4778 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Squamous Cell Carcinoma (TCGA): 1/489 (0.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GUW6 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

SPMAP1 | Neither / Antibody

ENSG00000275489

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 6.1 nTPM; unsited/Distal tubular cells; hpa_single_cell; unresolved; 2.963 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 3/133 (2.3%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 2/283 (0.7%)

Cancer IHC. pancreatic cancer: 12/12 (100.0%); testis cancer: 12/12 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A8MV24 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

SPMAP2L | Neither / Antibody

ENSG00000249693

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 12 nTPM; esophagus/schwann cells; hpa_single_cell_tissue; protected; 0.8593 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. prostate cancer: 8/11 (72.7%); renal cancer: 8/12 (66.7%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DJG4 | HPA portal (live; not the pinned values)

SPMIP3 | Neither / Cellular

ENSG00000173728

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 6.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 7.829 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Kidney Chromophobe (TCGA): 1/64 (1.6%); Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5SVJ3 | HPA portal (live; not the pinned values)

SPMIP7 | Neither / Antibody

ENSG00000164500

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 8.9 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.8397 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (validation): 1/81 (1.2%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Stomach Adenocarcinoma (TCGA): 1/346 (0.3%)

Cancer IHC. colorectal cancer: 2/11 (18.2%); liver cancer: 2/12 (16.7%)

Biology. Essential for normal spermatogenesis

Curated tissue note. Testis-specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A4D263 | HPA portal (live; not the pinned values)

SSU72L6 | Neither / Low

ENSG00000230268

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Head and Neck Squamous Cell Carcinoma (TCGA): 2/492 (0.4%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Protein phosphatase that catalyzes the dephosphorylation of the C-terminal domain of RNA polymerase II. Plays a role in RNA processing and termination

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1W2PR75 | HPA portal (live; not the pinned values)

SSX7 | Neither / Selectivity

ENSG00000187754

Decision. Insufficient reproductive enrichment; selectivity alone is not proof of unsafe targeting.

Normal RNA / IHC. 0.6 nTPM; retina/bulk; hpa_rna_consensus; vital; 1 TPM; blood/NK-cell; hpa_immune_monaco; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 5/169 (3.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 4/283 (1.4%); Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%)

Cancer IHC. melanoma: 3/10 (30.0%); liver cancer: 2/11 (18.2%)

Biology. Could act as a modulator of transcription

Curated tissue note. Testis-specific. Expressed in a melanoma cell line

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7RTT5 | HPA portal (live; not the pinned values)

STKLD1 | Neither / Antibody

ENSG00000198870

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 6.1 nTPM; lymph node/t-cells; hpa_single_cell_tissue; vital; 4.79 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 3/80 (3.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. pancreatic cancer: 9/12 (75.0%); stomach cancer: 8/12 (66.7%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NE28 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

SULT6B1 | Neither / Low

ENSG00000138068

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 6.731 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 3.738 TPM; blood/basophil; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 2/207 (1.0%); Stomach Adenocarcinoma (TCGA): 3/346 (0.9%); Kidney Renal Papillary Cell Carcinoma (TCGA): 1/282 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Sulfotransferase that utilizes 3'-phospho-5'-adenylyl sulfate (PAPS) as sulfonate donor to catalyze the sulfate conjugation of thyroxine. Involved in the metabolism of thyroxine (By similarity)

Curated tissue note. Specifically expressed in kidney and testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6IMI4 | HPA portal (live; not the pinned values)

SYCE2 | Neither / Cellular

ENSG00000161860

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 11.09 nTPM; blood/NK-cell; hpa_immune_cell_samples; vital; 13.48 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 31/50 (62.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 126/283 (44.5%); Ovary Serous Cystadenocarcinoma (TCGA): 109/349 (31.2%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. Major component of the transverse central element of synaptonemal complexes (SCS), formed between homologous chromosomes during meiotic prophase. Requires SYCP1 in order to be incorporated into the central element. May have a role in the synaptonemal complex assembly, stabilization and recombination (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6PIF2 | HPA portal (live; not the pinned values)

SYCP3 | Neither / Cellular

ENSG00000139351

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 16.9 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 8.7 TPM; blood/NK; dice_nk; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 229/231 (99.1%); Testicular Germ Cell Tumor (TCGA): 103/133 (77.4%); Pancreatic Adenocarcinoma (validation): 2/80 (2.5%)

Cancer IHC. renal cancer: 2/12 (16.7%); breast cancer: 0/12 (0.0%)

Biology. Component of the synaptonemal complexes (SCS), formed between homologous chromosomes during meiotic prophase. Required for centromere pairing during meiosis in male germ cells (By similarity). Required for normal meiosis during spermatogenesis and male fertility (PubMed:14643120). Plays a lesser role in female fertility. Required for efficient phosphorylation of HORMAD1 and HORMAD2 (By similarity)

Curated tissue note. Testis-specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IZU3 | HPA portal (live; not the pinned values)

TAAR2 | Neither / Low

ENSG00000146378

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.9 nTPM; unsited/Astrocytes; hpa_single_cell; unresolved; 0.1043 TPM; blood/gdT-cell; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Orphan olfactory receptor specific for trace amines. Trace amine compounds are enriched in animal body fluids and act on trace amine-associated receptors (TAARs) to elicit both intraspecific and interspecific innate behaviors. Ligand-binding causes a conformation change that triggers signaling via the G(s)-class of G proteins which activate adenylate cyclase

Curated tissue note. Not expressed in the pons, thalamus, hypothalamus, hippocampus, caudate, putamen, frontal cortex, basal forebrain, midbrain or liver

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9P1P5 | HPA portal (live; not the pinned values)

TAF1L | Neither / Antibody

ENSG00000122728

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 21.5 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 0.6642 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 1/50 (2.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 1/1022 (0.1%)

Cancer IHC. breast cancer: 1/12 (8.3%); lung cancer: 1/12 (8.3%)

Biology. May act as a functional substitute for TAF1/TAFII250 during male meiosis, when sex chromosomes are transcriptionally silenced

Curated tissue note. Testis specific, expressed apparently in germ cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IZX4 | HPA portal (live; not the pinned values)

TAS2R1 | Neither / Antibody

ENSG00000169777

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.5 nTPM; heart muscle/cardiomyocytes; hpa_single_cell_tissue; vital; 0.3 TPM; blood/Central memory CD8 T-cell; hpa_immune_monaco; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. glioma: 2/11 (18.2%); breast cancer: 0/12 (0.0%)

Biology. Receptor that may play a role in the perception of bitterness and is gustducin-linked. May play a role in sensing the chemical composition of the gastrointestinal content. The activity of this receptor may stimulate alpha gustducin, mediate PLC-beta-2 activation and lead to the gating of TRPM5

Curated tissue note. Expressed in subsets of taste receptor cells of the tongue and palate epithelium and exclusively in gustducin-positive cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9NYW7 | HPA portal (live; not the pinned values)

TAS2R41 | Neither / Antibody

ENSG00000221855

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.4 nTPM; colon/distal enterocytes; hpa_single_cell_tissue; protected; 5.676 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Breast Invasive Carcinoma (validation): 0/50 (0.0%)

Cancer IHC. liver cancer: 1/12 (8.3%); breast cancer: 0/12 (0.0%)

Biology. Receptor that may play a role in the perception of bitterness and is gustducin-linked. May play a role in sensing the chemical composition of the gastrointestinal content. The activity of this receptor may stimulate alpha gustducin, mediate PLC-beta-2 activation and lead to the gating of TRPM5 (By similarity)

Curated tissue note. Expressed in subsets of taste receptor cells of the tongue and exclusively in gustducin-positive cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P59536 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

TBC1D3F | Neither / Screening

ENSG00000275954

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.6 nTPM; cerebellum/bulk; hpa_rna_consensus; vital; 0.6221 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 19/231 (8.2%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 1/1022 (0.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Acts as a GTPase activating protein for RAB5. Does not act on RAB4 or RAB11 (By similarity)

Curated tissue note. Expressed in most tissues including pancreas, thymus and testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NER0 | HPA portal (live; not the pinned values)

TBC1D3I | Neither / Screening

ENSG00000274933

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 1.5 nTPM; pbmc/b-cells; hpa_single_cell_tissue; vital; 1.8 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Kidney Renal Papillary Cell Carcinoma (TCGA): 2/282 (0.7%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 1/1022 (0.1%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. Acts as a GTPase activating protein for RAB5. Does not act on RAB4 or RAB11 (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A087WXS9 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

TBX22 | Neither / Screening

ENSG00000122145

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 4.6 nTPM; thyroid gland/bulk; hpa_rna_consensus; manageable; 0.1977 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 1/50 (2.0%); Thyroid Carcinoma (TCGA): 2/495 (0.4%); Breast Invasive Carcinoma (TCGA): 1/1022 (0.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Probable transcriptional regulator involved in developmental processes. This is major determinant crucial to palatogenesis

Curated tissue note. Seems to be expressed at a low level

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y458 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

TCHHL1 | Neither / Selectivity

ENSG00000182898

Decision. Insufficient reproductive enrichment; selectivity alone is not proof of unsafe targeting.

Normal RNA / IHC. 0.7 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0.2349 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 3/176 (1.7%); Head and Neck Squamous Cell Carcinoma (TCGA): 5/492 (1.0%); Rectum Adenocarcinoma (validation): 2/207 (1.0%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5QJ38 | HPA portal (live; not the pinned values)

TDRD1 | Neither / Cellular

ENSG00000095627

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 10.8 nTPM; heart muscle/cardiomyocytes; hpa_single_cell_tissue; vital; 6.434 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Prostate Adenocarcinoma (TCGA): 200/480 (41.7%); Lung Adenocarcinoma (validation): 12/105 (11.4%); Pancreatic Adenocarcinoma (validation): 8/80 (10.0%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/12 (0.0%)

Biology. Plays a central role during spermatogenesis by participating in the repression transposable elements and preventing their mobilization, which is essential for the germline integrity. Acts via the piRNA metabolic process, which mediates the repression of transposable elements during meiosis by forming complexes composed of piRNAs and Piwi proteins and governs the methylation and subsequent repression of transposons. Required for the ... [full text in table]

Curated tissue note. Testis and ovary specific. Also expressed in several cancers

Reconsideration. Resolve the borderline immune RNA with source-specific read review and reliable local protein evidence.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9BXT4 | HPA portal (live; not the pinned values)

TDRD12 | Neither / Cellular

ENSG00000173809

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 4.1 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 18.51 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 96/133 (72.2%); Lung Squamous Cell Carcinoma (validation): 9/68 (13.2%); Skin Cuteneous Melanoma (TCGA): 8/99 (8.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Probable ATP-binding RNA helicase required during spermatogenesis to repress transposable elements and preventing their mobilization, which is essential for the germline integrity. Acts via the piRNA metabolic process, which mediates the repression of transposable elements during meiosis by forming complexes composed of piRNAs and Piwi proteins and governs the methylation and subsequent repression of transposons. Involved in the ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q587J7 | HPA portal (live; not the pinned values)

TDRD15 | Neither / Antibody

ENSG00000218819

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 12.1 nTPM; small intestine/mixed immune cells; hpa_single_cell_tissue; vital; 2.316 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Squamous Cell Carcinoma (TCGA): 1/489 (0.2%)

Cancer IHC. pancreatic cancer: 1/11 (9.1%); renal cancer: 1/11 (9.1%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt B5MCY1 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

TENT5D | Neither / Antibody

ENSG00000174016

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.4 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.434 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. breast cancer: 8/12 (66.7%); pancreatic cancer: 4/10 (40.0%)

Biology. Catalyzes the transfer of one adenosine molecule from an ATP to an mRNA poly(A) tail bearing a 3'-OH terminal group

Curated tissue note. restricted to testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NEK8 | HPA portal (live; not the pinned values)

TERB1 | Neither / Cellular

ENSG00000249961

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 6.382 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 8.4 TPM; blood/naive CD8 T-cell; hpa_immune_monaco; vital

Cancer RNA. Pancreatic Adenocarcinoma (validation): 17/80 (21.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 25/176 (14.2%); Kidney Chromophobe (TCGA): 8/64 (12.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Meiosis-specific telomere-associated protein involved in meiotic telomere attachment to the nucleus inner membrane, a crucial step for homologous pairing and synapsis. Component of the MAJIN-TERB1-TERB2 complex, which promotes telomere cap exchange by mediating attachment of telomeric DNA to the inner nuclear membrane and replacement of the protective cap of telomeric chromosomes: in early meiosis, the MAJIN-TERB1-TERB2 complex ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NA31 | HPA portal (live; not the pinned values)

TEX13B | Neither / Low

ENSG00000170925

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.3 nTPM; eye/bipolar cells; hpa_single_cell_tissue; vital; 0.5481 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 4/133 (3.0%); Breast Invasive Carcinoma (validation): 1/50 (2.0%); Lung Squamous Cell Carcinoma (validation): 1/68 (1.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Testis specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9BXU2 | HPA portal (live; not the pinned values)

TEX13C | Neither / Low

ENSG00000282815

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; adipose tissue/fibroblasts; hpa_single_cell_tissue; manageable; 0.1199 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 8/99 (8.1%); Liver Hepatocellular Carcinoma (TCGA): 6/362 (1.7%); Lung Adenocarcinoma (TCGA): 8/497 (1.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A0J9YWL9 | HPA portal (live; not the pinned values)

TEX13D | Neither / Low

ENSG00000282419

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; pbmc/t-cells; hpa_single_cell_tissue; vital; 0.3463 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 3/133 (2.3%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A0J9YY54 | HPA portal (live; not the pinned values)

TEX28 | Neither / Screening

ENSG00000278057

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 3.7 nTPM; skin/smooth muscle cells; hpa_single_cell_tissue; manageable; 0.6604 TPM; blood/naive CD8 T-cell; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Testis specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt O15482 | HPA portal (live; not the pinned values)

TEX35 | Neither / Cellular

ENSG00000240021

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 6.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 8.5 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 189/207 (91.3%); Colon Adenocarcinoma (validation): 428/486 (88.1%); Testicular Germ Cell Tumor (TCGA): 7/133 (5.3%)

Cancer IHC. liver cancer: 4/12 (33.3%); pancreatic cancer: 2/11 (18.2%)

Biology. Testis-specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5T0J7 | HPA portal (live; not the pinned values)

TEX48 | Neither / Cellular

ENSG00000230601

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 4.3 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 6.602 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 2/169 (1.2%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GUV7 | HPA portal (live; not the pinned values)

TEX50 | Neither / Screening

ENSG00000232113

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 5 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.4538 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Sperm membrane protein required for stability of the sperm acrosome after its formation in the testis. Essential for male fertility

Curated tissue note. Testis-specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GTY4 | HPA portal (live; not the pinned values)

TEX53 | Neither / Cellular

ENSG00000230054

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 6.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 10.72 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Expressed in Testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GU33 | HPA portal (live; not the pinned values)

TFDP3 | Neither / Low

ENSG00000183434

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.4 nTPM; lung/macrophages; hpa_single_cell_tissue; vital; 0.196 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 8/50 (16.0%); Testicular Germ Cell Tumor (TCGA): 15/133 (11.3%); Liver Hepatocellular Carcinoma (validation): 17/231 (7.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Competitive inhibitor of E2F-mediated transactivation activity. Impairs E2F-mediated cell-cycle progression from G(1) to S phase

Curated tissue note. Predominantly expressed in testis. Low level of expression in pancreas. Highly expressed in ovarian and colon cancer cell lines

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5H9I0 | HPA portal (live; not the pinned values)

TGIF2LY | Neither / Low

ENSG00000176679

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0 nTPM; blood/MAIT T-cell; hpa_immune_cell; vital; 0 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 6/133 (4.5%); Lung Squamous Cell Carcinoma (TCGA): 3/489 (0.6%); Lung Adenocarcinoma (TCGA): 2/497 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May have a transcription role in testis. May act as a competitor/regulator of TGIF2LX

Curated tissue note. Specifically expressed in adult testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IUE0 | HPA portal (live; not the pinned values)

TGM7 | Neither / Low

ENSG00000159495

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 21 nTPM; tongue/suprabasal keratinocytes; hpa_single_cell_tissue; protected; 0.3564 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 12/176 (6.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 1/283 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Catalyzes the cross-linking of proteins and the conjugation of polyamines to proteins

Curated tissue note. Widely expressed

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96PF1 | HPA portal (live; not the pinned values)

TKTL2 | Neither / Cellular

ENSG00000151005

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 3.1 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 9.706 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Plays an essential role in total transketolase activity and cell proliferation in cancer cells; after transfection with anti-TKTL1 siRNA, total transketolase activity dramatically decreases and proliferation was significantly inhibited in cancer cells. Plays a pivotal role in carcinogenesis

Curated tissue note. Overexpressed in hepatoma cancer cells

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H0I9 | HPA portal (live; not the pinned values)

TLE7 | Neither / Low

ENSG00000260734

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.4626 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 10/133 (7.5%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Squamous Cell Carcinoma (TCGA): 1/489 (0.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1W2PR48 | HPA portal (live; not the pinned values)

TMEM239 | Neither / Screening

ENSG00000198326

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.8 nTPM; retina/bulk; hpa_rna_consensus; vital; 1.245 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 7/176 (4.0%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 3/283 (1.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8WW34 | HPA portal (live; not the pinned values)

TMEM247 | Neither / Unassessed

ENSG00000284701

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 3.1 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.4911 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 4/133 (3.0%); Head and Neck Squamous Cell Carcinoma (TCGA): 4/492 (0.8%); Lung Squamous Cell Carcinoma (TCGA): 3/489 (0.6%)

Cancer IHC. stomach cancer: 1/9 (11.1%); breast cancer: 0/11 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NEH6 | HPA portal (live; not the pinned values)

TMEM262 | Neither / Cellular

ENSG00000187066

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 3.1 nTPM; spleen/t-cells; hpa_single_cell_tissue; vital; 7.483 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Auxiliary component of the CatSper complex, a complex involved in sperm cell hyperactivation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt E9PQX1 | HPA portal (live; not the pinned values)

TMEM89 | Neither / Antibody

ENSG00000183396

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.5 nTPM; small intestine/paneth cells; hpa_single_cell_tissue; vital; 2.842 TPM; blood/NK; dice_nk; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 3/207 (1.4%); Colon Adenocarcinoma (validation): 6/486 (1.2%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 3/283 (1.1%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A2RUT3 | HPA portal (live; not the pinned values)

TMPRSS7 | Neither / Antibody

ENSG00000176040

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 10.4 nTPM; lung/ciliated cells; hpa_single_cell_tissue; vital; 0.7267 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Glioblastoma Multiforme (validation): 6/58 (10.3%); Kidney Chromophobe (TCGA): 1/64 (1.6%); Glioblastoma Multiforme (TCGA): 2/141 (1.4%)

Cancer IHC. melanoma: 11/11 (100.0%); skin cancer: 8/10 (80.0%)

Biology. Serine protease which preferentially hydrolyzes peptides with Arg at the P1 position

Curated tissue note. Expressed in brain, ovary, testis, salivary gland, trachea and lung

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7RTY8 | HPA portal (live; not the pinned values)

TOPAZ1 | Neither / Antibody

ENSG00000173769

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.3 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.3593 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. stomach cancer: 11/11 (100.0%); pancreatic cancer: 10/10 (100.0%)

Biology. Important for normal spermatogenesis and male fertility. Specifically required for progression to the post-meiotic stages of spermatocyte development. Seems to be necessary for normal expression levels of a number of testis-expressed gene transcripts, although its role in this process is unclear

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N9V7 | HPA portal (live; not the pinned values)

TP53TG3 | Neither / Screening

ENSG00000183632

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.3 nTPM; adrenal gland/bulk; hpa_rna_consensus; vital; 0.2237 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (validation): 2/81 (2.5%); Skin Cuteneous Melanoma (TCGA): 2/99 (2.0%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a significant role in p53/TP53-mediating signaling pathway

Curated tissue note. Strongly expressed in testis. Weakly expressed in heart, placenta and skeletal muscle

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9ULZ0 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

TP53TG3B | Neither / Low

ENSG00000261509

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.1 nTPM; cerebellum/bulk; hpa_rna_consensus; vital; 0.0036 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 7/99 (7.1%); Breast Invasive Carcinoma (validation): 2/50 (4.0%); Ovary Serous Cystadenocarcinoma (TCGA): 12/349 (3.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a significant role in p53/TP53-mediating signaling pathway

Curated tissue note. Strongly expressed in testis. Weakly expressed in heart, placenta and skeletal muscle

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9ULZ0 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

TP53TG3C | Neither / Low

ENSG00000205457

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.4017 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 0.2856 TPM; blood/neutrophil; hpa_immune_cell_samples; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (validation): 6/81 (7.4%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a significant role in p53/TP53-mediating signaling pathway

Curated tissue note. Strongly expressed in testis. Weakly expressed in heart, placenta and skeletal muscle

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9ULZ0 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

TP53TG3D | Neither / Low

ENSG00000205456

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 7.4 nTPM; lung/ciliated cells; hpa_single_cell_tissue; vital; 0.9 TPM; blood/naive B-cell; hpa_immune_monaco; vital

Cancer RNA. Ovary Serous Cystadenocarcinoma (validation): 8/81 (9.9%); Skin Cuteneous Melanoma (TCGA): 5/99 (5.1%); Ovary Serous Cystadenocarcinoma (TCGA): 10/349 (2.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May play a significant role in p53/TP53-mediating signaling pathway

Curated tissue note. Strongly expressed in testis. Weakly expressed in heart, placenta and skeletal muscle

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9ULZ0 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

TPRX1 | Neither / Antibody

ENSG00000178928

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.7 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 2.809 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 15/133 (11.3%); Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. colorectal cancer: 11/12 (91.7%); lymphoma: 9/12 (75.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

TRIM43 | Neither / Antibody

ENSG00000144015

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.3 nTPM; thymus/bulk; hpa_rna_consensus; manageable; 0.4226 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 10/133 (7.5%); Uterine Corpus Endometrial Carcinoma (TCGA): 10/176 (5.7%); Ovary Serous Cystadenocarcinoma (TCGA): 8/349 (2.3%)

Cancer IHC. pancreatic cancer: 8/11 (72.7%); prostate cancer: 7/12 (58.3%)

Biology. E3 ligase that regulates nuclear lamina integrity and the association of viral chromatin with transcriptionally-active host chromatin. Acts thereby as a herpesvirus-specific antiviral factor and mediates the ubiquitination-dependent proteasomal degradation of PCNT

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96BQ3 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

TRIM43B | Neither / Antibody

ENSG00000144010

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.3 nTPM; thymus/bulk; hpa_rna_consensus; manageable; 0.3537 TPM; blood/TREG_MEM; dice_treg_mem; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 17/133 (12.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%)

Cancer IHC. pancreatic cancer: 8/11 (72.7%); prostate cancer: 7/12 (58.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NCK2 | HPA portal (live; not the pinned values)

TRIM48 | Neither / Low

ENSG00000150244

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; skin/bulk; hpa_rna_consensus; manageable; 0.1751 TPM; blood/basophil; hpa_immune_cell_samples; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 8/99 (8.1%); Glioblastoma Multiforme (validation): 2/58 (3.4%); Glioblastoma Multiforme (TCGA): 3/141 (2.1%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. E3 ubiquitin-protein ligase which promotes K48-linked polyubiquitination of protein methyltransferase PRMT1, leading to PRMT1 degradation (PubMed:29186683). This suppresses methylation of the PRMT1 substrate MAP3K5/ASK1, promoting its activation and increasing MAP3K5-dependent cell death induced by oxidative stress (PubMed:29186683). TRIM48-mediated ubiquitination of PRMT1 also suppresses methylation of FOXO1 by PRMT1, leading to ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IWZ4 | HPA portal (live; not the pinned values)

TRIM49 | Neither / Low

ENSG00000168930

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.3407 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 1.2 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 5/133 (3.8%); Lung Squamous Cell Carcinoma (TCGA): 5/489 (1.0%); Head and Neck Squamous Cell Carcinoma (TCGA): 5/492 (1.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Preferentially expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0CI25 | HPA portal (live; not the pinned values)

TRIM49B | Neither / Low

ENSG00000182053

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.3 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.1407 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Head and Neck Squamous Cell Carcinoma (TCGA): 3/492 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Lung Squamous Cell Carcinoma (TCGA): 2/489 (0.4%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NDI0 | HPA portal (live; not the pinned values)

TRIM49C | Neither / Low

ENSG00000204449

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.3407 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 1.2 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Head and Neck Squamous Cell Carcinoma (TCGA): 3/492 (0.6%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0CI26 | HPA portal (live; not the pinned values)

TRIM51 | Neither / Antibody

ENSG00000124900

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 15.85 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 14.1 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 46/99 (46.5%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. cervical cancer: 4/11 (36.4%); liver cancer: 3/12 (25.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9BSJ1 | HPA portal (live; not the pinned values)

TRIM60 | Neither / Antibody

ENSG00000176979

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 2.4 nTPM; vascular/endothelial cells; hpa_single_cell_tissue; vital; 0.5 TPM; blood/Central memory CD8 T-cell; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 62/133 (46.6%); Stomach Adenocarcinoma (TCGA): 2/346 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. liver cancer: 6/12 (50.0%); renal cancer: 6/12 (50.0%)

Biology. E3 SUMO-protein ligase that mediates SUMOylation of TAB2 leading to inhibition of NF-kappa-B and MAPK pathways by suppressing the TRAF6/TAB2/TAK1 complex

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q495X7 | HPA portal (live; not the pinned values)

TRIM71 | Neither / Antibody

ENSG00000206557

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 12 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 3.59 TPM; blood/MONOCYTES; dice_monocytes; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 125/133 (94.0%); Glioblastoma Multiforme (validation): 11/58 (19.0%); Liver Hepatocellular Carcinoma (TCGA): 26/362 (7.2%)

Cancer IHC. endometrial cancer: 12/12 (100.0%); liver cancer: 12/12 (100.0%)

Biology. E3 ubiquitin-protein ligase that cooperates with the microRNAs (miRNAs) machinery and promotes embryonic stem cells proliferation and maintenance (Probable). Binds to miRNAs and associates with AGO2, participating in post-transcriptional repression of transcripts such as CDKN1A (By similarity). In addition, participates in post-transcriptional mRNA repression in a miRNA independent mechanism (PubMed:23125361). Facilitates the G1-S ... [full text in table]

Curated tissue note. Specifically expressed in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q2Q1W2 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

TRIML2 | Neither / Antibody

ENSG00000179046

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 5.7 nTPM; colon/undifferentiated cells; hpa_single_cell_tissue; protected; 0.7907 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 115/133 (86.5%); Head and Neck Squamous Cell Carcinoma (TCGA): 39/492 (7.9%); Pancreatic Adenocarcinoma (validation): 3/80 (3.8%)

Cancer IHC. colorectal cancer: 12/12 (100.0%); cervical cancer: 10/11 (90.9%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8N7C3 | HPA portal (live; not the pinned values)

TSGA13 | Neither / Antibody

ENSG00000213265

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.9 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 1.483 TPM; blood/CD8_NAIVE; dice_cd8_naive; vital

Cancer RNA. Kidney Chromophobe (TCGA): 9/64 (14.1%); Pancreatic Adenocarcinoma (validation): 5/80 (6.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 6/176 (3.4%)

Cancer IHC. melanoma: 7/12 (58.3%); glioma: 1/12 (8.3%)

Biology. Testis-specific

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96PP4 | HPA portal (live; not the pinned values)

TSKS | Neither / Cellular

ENSG00000126467

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 8.1 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 17.2 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 38/133 (28.6%); Head and Neck Squamous Cell Carcinoma (TCGA): 62/492 (12.6%); Bladder Urothelial Carcinoma (TCGA): 7/169 (4.1%)

Cancer IHC. breast cancer: 0/11 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. May play a role in testicular physiology, most probably in the process of spermatogenesis or spermatid development

Curated tissue note. Highly expressed in testis. Expressed at low levels in prostate, female breast, placenta, ovary and thymus

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9UJT2 | HPA portal (live; not the pinned values)

TSSK2 | Neither / Screening

ENSG00000206203

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 11.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.6387 TPM; blood/eosinophil; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 6/133 (4.5%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 5/283 (1.8%); Bladder Urothelial Carcinoma (TCGA): 2/169 (1.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Testis-specific serine/threonine-protein kinase required during spermatid development. Phosphorylates TSKS at 'Ser-288' and SPAG16. Involved in the late stages of spermatogenesis, during the reconstruction of the cytoplasm. During spermatogenesis, required for the transformation of a ring-shaped structure around the base of the flagellum originating from the chromatoid body

Curated tissue note. Testis-specific. Present in mature spermatozoa (at protein level)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96PF2 | HPA portal (live; not the pinned values)

TSSK6 | Neither / Cellular

ENSG00000178093

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 22.9 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 8.613 TPM; blood/TREG_NAIVE; dice_treg_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 37/50 (74.0%); Glioblastoma Multiforme (validation): 8/58 (13.8%); Kidney Chromophobe (TCGA): 7/64 (10.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Serine/threonine-protein kinase component of the sperm flagellar doublet microtubules (PubMed:15870294). May act as a regulator of sperm motility by mediating phosphorylation of sperm doublet microtubule proteins (By similarity). Plays a role in DNA condensation during postmeiotic chromatin remodeling and histone-to-protamine transition during spermatogenesis (By similarity)

Curated tissue note. Highly expressed in testis. Expressed at lower levels in colon, small intestine, ovary, prostate, thymus, spleen and peripheral blood leukocytes

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9BXA6 | HPA portal (live; not the pinned values)

TTLL2 | Neither / Cellular

ENSG00000120440

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 1.6 nTPM; liver/bulk; hpa_rna_consensus; vital; 7.192 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 8/231 (3.5%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Kidney Renal Clear Cell Carcinoma (validation): 1/100 (1.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Probable tubulin polyglutamylase that generates side chains of glutamate on the gamma-carboxyl group of specific glutamate residues within the C-terminal tail of target proteins (By similarity). Similar to TTLL1, may acquire enzymatic activity only in complex with other proteins as it is most likely lacking domains important for autonomous activity (By similarity). Probably involved in the side-chain initiation step of the ... [full text in table]

Curated tissue note. Testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9BWV7 | HPA portal (live; not the pinned values)

TTLL8 | Neither / Antibody

ENSG00000138892

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.8 nTPM; bone marrow/b-cells; hpa_single_cell_tissue; vital; 0.4925 TPM; blood/CD4_STIM; dice_cd4_stim; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. colorectal cancer: 11/11 (100.0%); liver cancer: 11/12 (91.7%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

TUBA3C | Neither / Antibody

ENSG00000198033

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 16.7 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 3.03 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 17/133 (12.8%); Liver Hepatocellular Carcinoma (TCGA): 33/362 (9.1%); Skin Cuteneous Melanoma (TCGA): 9/99 (9.1%)

Cancer IHC. testis cancer: 7/11 (63.6%); glioma: 5/11 (45.5%)

Biology. Tubulin is the major constituent of microtubules, a cylinder consisting of laterally associated linear protofilaments composed of alpha- and beta-tubulin heterodimers. Microtubules grow by the addition of GTP-tubulin dimers to the microtubule end, where a stabilizing cap forms. Below the cap, tubulin dimers are in GDP-bound state, owing to GTPase activity of alpha-tubulin

Curated tissue note. Expressed in testis | Expressed in the cornea, sclera, and peripheral blood (PubMed:29051577)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DPH7 | UniProt P0DPH8 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

UBQLNL | Neither / Cellular

ENSG00000175518

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 6.3 nTPM; heart muscle/endothelial cells; hpa_single_cell_tissue; vital; 16.33 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 14/50 (28.0%); Uterine Corpus Endometrial Carcinoma (TCGA): 5/176 (2.8%); Liver Hepatocellular Carcinoma (validation): 5/231 (2.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IYU4 | HPA portal (live; not the pinned values)

UMODL1 | Neither / Antibody

ENSG00000177398

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.1 nTPM; lung/endothelial cells; hpa_single_cell_tissue; vital; 2.501 TPM; blood/M2; dice_m2; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 5/50 (10.0%); Kidney Chromophobe (TCGA): 3/64 (4.7%); Ovary Serous Cystadenocarcinoma (validation): 1/81 (1.2%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/11 (0.0%)

Biology. Isoform 4 is expressed at low level in kidney, testis and fetal thymus. Isoform 3 is expressed at low level in prostate, testis and fetal thymus

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5DID0 | HPA portal (live; not the pinned values)

USP29 | Neither / Cellular

ENSG00000131864

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 3.619 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 7.9 TPM; blood/intermediate monocyte; hpa_immune_monaco; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 22/207 (10.6%); Colon Adenocarcinoma (validation): 42/486 (8.6%); Testicular Germ Cell Tumor (TCGA): 9/133 (6.8%)

Cancer IHC. urothelial cancer: 1/12 (8.3%); breast cancer: 0/12 (0.0%)

Biology. Deubiquitinase involved in innate antiviral immunity by mediating 'Lys-48'-linked deubiquitination of CGAS, thereby promoting its stabilization

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9HBJ7 | HPA portal (live; not the pinned values)

USP50 | Neither / Antibody

ENSG00000170236

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 12.5 nTPM; brain/oligodendrocytes; hpa_single_cell_tissue; vital; 1.571 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 61/231 (26.4%); Uterine Corpus Endometrial Carcinoma (TCGA): 3/176 (1.7%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%)

Cancer IHC. testis cancer: 10/12 (83.3%); liver cancer: 9/12 (75.0%)

Biology. Deubiquitinating enzyme that removes conjugated ubiquitin from specific proteins to regulate different cellular processes. Regulates the inflammasome signaling pathway by deubiquitinating 'Lys-63'-linked polyubiquitination of the PYCARD/ASC adapter protein (PubMed:28094437). Regulates the ubiquitination and stability of the ACE2 protein (PubMed:36876523). Acts as a negative regulator of the G2/M checkpoint pathway, by preventing ... [full text in table]

Curated tissue note. Weakly expressed in a few tissues

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q70EL3 | HPA portal (live; not the pinned values)

VN1R4 | Neither / Antibody

ENSG00000228567

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.2003 nTPM; blood/MAIT T-cell; hpa_immune_cell_samples; vital; 0.6351 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 2/133 (1.5%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%)

Cancer IHC. breast cancer: 9/12 (75.0%); stomach cancer: 7/11 (63.6%)

Biology. Putative pheromone receptor

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q7Z5H5 | HPA portal (live; not the pinned values)

VN1R5 | Neither / Unassessed

ENSG00000197617

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 0.6741 nTPM; blood/plasmacytoid DC; hpa_immune_cell_samples; vital; 2.596 TPM; blood/NK; dice_nk; vital

Cancer RNA. No exact-ID RNA coverage in the HPA cancer snapshot

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

VRTN | Neither / Antibody

ENSG00000133980

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1 nTPM; small intestine/undifferentiated cells; hpa_single_cell_tissue; vital; 0.4659 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 121/133 (91.0%); Stomach Adenocarcinoma (TCGA): 9/346 (2.6%); Ovary Serous Cystadenocarcinoma (validation): 1/81 (1.2%)

Cancer IHC. stomach cancer: 12/12 (100.0%); testis cancer: 12/12 (100.0%)

Biology. Acts as a transcription factor that regulates development of thoracic vertebrae

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9H8Y1 | HPA portal (live; not the pinned values)

WDR88 | Neither / Antibody

ENSG00000166359

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 5.1 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 14.81 TPM; blood/NK; dice_nk; vital

Cancer RNA. Skin Cuteneous Melanoma (TCGA): 2/99 (2.0%); Bladder Urothelial Carcinoma (TCGA): 3/169 (1.8%); Kidney Renal Papillary Cell Carcinoma (TCGA): 5/282 (1.8%)

Cancer IHC. colorectal cancer: 11/11 (100.0%); prostate cancer: 9/9 (100.0%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZMY6 | HPA portal (live; not the pinned values)

WFDC9 | Neither / Screening

ENSG00000180205

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.5 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.0722 TPM; blood/total PBMC; hpa_immune_cell_samples; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 2/207 (1.0%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8NEX5 | HPA portal (live; not the pinned values)

XAGE5 | Neither / Antibody

ENSG00000171405

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 0.4 nTPM; salivary gland/plasma cells; hpa_single_cell_tissue; vital; 2.267 TPM; blood/TFH; dice_tfh; vital

Cancer RNA. Liver Hepatocellular Carcinoma (validation): 32/231 (13.9%); Liver Hepatocellular Carcinoma (TCGA): 41/362 (11.3%); Lung Squamous Cell Carcinoma (TCGA): 13/489 (2.7%)

Cancer IHC. colorectal cancer: 1/12 (8.3%); liver cancer: 1/12 (8.3%)

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8WWM1 | HPA portal (live; not the pinned values)

XKR3 | Neither / Antibody

ENSG00000172967

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.765 nTPM; blood/neutrophil; hpa_immune_cell_samples; vital; 3 TPM; blood/neutrophil; hpa_immune_monaco; vital

Cancer RNA. Glioblastoma Multiforme (validation): 1/58 (1.7%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. prostate cancer: 10/10 (100.0%); melanoma: 11/12 (91.7%)

Biology. Expressed predominantly, if not exclusively, in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q5GH77 | HPA portal (live; not the pinned values)

ZAN | Neither / Low

ENSG00000146839

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.6 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.428 TPM; blood/plasmacytoid DC; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 9/133 (6.8%); Breast Invasive Carcinoma (validation): 2/50 (4.0%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. Binds in a species-specific manner to the zona pellucida of the egg. May be involved in gamete recognition and/or signaling

Curated tissue note. In testis, primarily in haploid spermatids

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q9Y493 | HPA portal (live; not the pinned values)

ZAR1 | Neither / Low

ENSG00000182223

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 5.6 nTPM; brain/inhibitory neurons; hpa_single_cell_tissue; vital; 0.9204 TPM; blood/NK; dice_nk; vital

Cancer RNA. Glioblastoma Multiforme (validation): 4/58 (6.9%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. mRNA-binding protein that mediates formation of MARDO (mitochondria-associated ribonucleoprotein domain), a membraneless compartment that stores maternal mRNAs in oocytes. MARDO assembly around mitochondria is directed by an increase in mitochondrial membrane potential during oocyte growth. Promotes formation of MARDO phase-separated membraneless compartment by undergoing liquid-liquid phase separation upon binding to maternal mRNAs. ... [full text in table]

Curated tissue note. Ovary and testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q86SH2 | HPA portal (live; not the pinned values)

ZAR1L | Neither / Antibody

ENSG00000189167

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 4.2 nTPM; small intestine/undifferentiated cells; hpa_single_cell_tissue; vital; 1.468 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 2/176 (1.1%); Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%)

Cancer IHC. melanoma: 12/12 (100.0%); liver cancer: 11/11 (100.0%)

Biology. mRNA-binding protein required for maternal mRNA storage, translation and degradation during oocyte maturation (By similarity). Probably promotes formation of some phase-separated membraneless compartment that stores maternal mRNAs in oocytes: acts by undergoing liquid-liquid phase separation upon binding to maternal mRNAs (By similarity). Binds to the 3'-UTR of maternal mRNAs, inhibiting their translation (By similarity)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NP61 | HPA portal (live; not the pinned values)

ZC3H11B | Neither / Antibody

ENSG00000215817

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 5.4 nTPM; eye/rod photoreceptor cells; hpa_single_cell_tissue; vital; 2.386 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 7/58 (12.1%); Skin Cuteneous Melanoma (TCGA): 2/99 (2.0%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%)

Cancer IHC. colorectal cancer: 11/12 (91.7%); testis cancer: 9/11 (81.8%)

Biology. May play a role in mRNA transport

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GTU1 | HPA portal (live; not the pinned values)

ZFP42 | Neither / Antibody

ENSG00000179059

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 3.229 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 2.991 TPM; blood/NK-cell; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 122/133 (91.7%); Uterine Corpus Endometrial Carcinoma (TCGA): 18/176 (10.2%); Ovary Serous Cystadenocarcinoma (validation): 8/81 (9.9%)

Cancer IHC. colorectal cancer: 9/12 (75.0%); skin cancer: 7/12 (58.3%)

Biology. Involved in the reprogramming of X-chromosome inactivation during the acquisition of pluripotency. Required for efficient elongation of TSIX, a non-coding RNA antisense to XIST. Binds DXPas34 enhancer within the TSIX promoter. Involved in ES cell self-renewal (By similarity)

Curated tissue note. Expressed in kidney, epidermal keratinocytes, prostate epithelial cells, bronchial and small airway lung epithelial cells (at protein level). Expressed in malignant kidney and several carcinoma cell lines (at ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96MM3 | HPA portal (live; not the pinned values)

ZIM3 | Neither / Antibody

ENSG00000141946

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 1.2 nTPM; liver/hepatocytes; hpa_single_cell_tissue; vital; 1.42 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Uterine Corpus Endometrial Carcinoma (TCGA): 16/176 (9.1%); Pancreatic Adenocarcinoma (validation): 1/80 (1.2%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%)

Cancer IHC. colorectal cancer: 10/12 (83.3%); ovarian cancer: 6/11 (54.5%)

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96PE6 | HPA portal (live; not the pinned values)

ZNF469 | Neither / Cellular

ENSG00000225614

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 27.8 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 7.052 TPM; blood/NK; dice_nk; vital

Cancer RNA. Breast Invasive Carcinoma (validation): 35/50 (70.0%); Colon Adenocarcinoma (validation): 251/486 (51.6%); Pancreatic Adenocarcinoma (validation): 29/80 (36.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Curated tissue note. Detected in cornea, sclera, skin fibroblasts and striated muscle

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96JG9 | HPA portal (live; not the pinned values)

ZNF475 | Neither / Screening

ENSG00000250803

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 16.7 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.4135 TPM; blood/TH2; dice_th2; vital

Cancer RNA. Glioblastoma Multiforme (validation): 4/58 (6.9%); Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%); Skin Cuteneous Melanoma (TCGA): 1/99 (1.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GTH9 | HPA portal (live; not the pinned values)

ZNF479 | Neither / Low

ENSG00000185177

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.69 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 0.9 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Colon Adenocarcinoma (TCGA): 2/254 (0.8%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Colon Adenocarcinoma (validation): 1/486 (0.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Curated tissue note. Expressed primarily in testis and fetal tissues

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96JC4 | HPA portal (live; not the pinned values)

ZNF501 | Neither / Antibody

ENSG00000186446

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 15.6 nTPM; esophagus/plasma cells; hpa_single_cell_tissue; vital; 5.707 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 58/58 (100.0%); Breast Invasive Carcinoma (validation): 42/50 (84.0%); Pancreatic Adenocarcinoma (validation): 27/80 (33.8%)

Cancer IHC. colorectal cancer: 12/12 (100.0%); breast cancer: 8/9 (88.9%)

Biology. May be involved in transcriptional regulation. Essential for Golgi structural integrity (PubMed:29851555)

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96CX3 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

ZNF560 | Neither / Screening

ENSG00000198028

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 3.9 nTPM; bronchus/basal respiratory cells; hpa_single_cell_tissue; vital; 0.9846 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 95/133 (71.4%); Glioblastoma Multiforme (validation): 23/58 (39.7%); Glioblastoma Multiforme (TCGA): 12/141 (8.5%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q96MR9 | HPA portal (live; not the pinned values)

ZNF679 | Neither / Low

ENSG00000197123

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.8 nTPM; heart muscle/endothelial cells; hpa_single_cell_tissue; vital; 0.52 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Glioblastoma Multiforme (validation): 7/58 (12.1%); Glioblastoma Multiforme (TCGA): 4/141 (2.8%); Uterine Corpus Endometrial Carcinoma (TCGA): 3/176 (1.7%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q8IYX0 | HPA portal (live; not the pinned values)

ZNF705A | Neither / Low

ENSG00000196946

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.4 nTPM; cerebral cortex/bulk; hpa_rna_consensus; vital; 1.4 TPM; blood/Terminal effector memory CD4 T-cell; hpa_immune_monaco; vital

Cancer RNA. Glioblastoma Multiforme (TCGA): 15/141 (10.6%); Lung Squamous Cell Carcinoma (validation): 2/68 (2.9%); Ovary Serous Cystadenocarcinoma (TCGA): 10/349 (2.9%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZN79 | HPA portal (live; not the pinned values)

ZNF705B | Neither / Low

ENSG00000215356

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.5 nTPM; unsited/Oligodendrocyte precursor cells; hpa_single_cell; unresolved; 0.1504 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 0/283 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0CI00 | HPA portal (live; not the pinned values)

ZNF705D | Neither / Low

ENSG00000215343

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; kidney/proximal tubular cells; hpa_single_cell_tissue; vital; 0.3603 TPM; blood/TH1; dice_th1; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 20/133 (15.0%); Kidney Renal Clear Cell Carcinoma (validation): 1/100 (1.0%); Kidney Renal Clear Cell Carcinoma (TCGA): 1/521 (0.2%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0CH99 | HPA portal (live; not the pinned values)

ZNF705G | Neither / Low

ENSG00000215372

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 2.6 nTPM; eye/muller glia cells; hpa_single_cell_tissue; vital; 0.2697 TPM; blood/THSTAR; dice_thstar; vital

Cancer RNA. Rectum Adenocarcinoma (validation): 1/207 (0.5%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A8MUZ8 | HPA portal (live; not the pinned values)

ZNF716 | Neither / Low

ENSG00000182111

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.1 nTPM; skin/macrophages; hpa_single_cell_tissue; vital; 1.041 TPM; blood/NK; dice_nk; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 51/133 (38.3%); Pancreatic Adenocarcinoma (validation): 2/80 (2.5%); Uterine Corpus Endometrial Carcinoma (TCGA): 4/176 (2.3%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NP11 | HPA portal (live; not the pinned values)

ZNF722 | Neither / Low

ENSG00000241149

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.212 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 1.4 TPM; blood/basophil; hpa_immune_monaco; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 15/133 (11.3%); Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Stomach Adenocarcinoma (TCGA): 2/346 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1W2PQL4 | HPA portal (live; not the pinned values)

ZNF723 | Neither / Unassessed

ENSG00000268696

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 1.679 nTPM; blood/basophil; hpa_immune_cell_samples; vital; 1.567 TPM; blood/basophil; hpa_immune_cell_samples; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 73/133 (54.9%); Kidney Chromophobe (TCGA): 8/64 (12.5%); Uterine Corpus Endometrial Carcinoma (TCGA): 10/176 (5.7%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0DPD5 | HPA portal (live; not the pinned values)

ZNF729 | Neither / Low

ENSG00000196350

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 1.2 nTPM; vascular/endothelial cells; hpa_single_cell_tissue; vital; 0.2701 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 71/133 (53.4%); Glioblastoma Multiforme (validation): 3/58 (5.2%); Uterine Corpus Endometrial Carcinoma (TCGA): 1/176 (0.6%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A6NN14 | HPA portal (live; not the pinned values)

ZNF730 | Neither / Cellular

ENSG00000183850

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 11.3 nTPM; unsited/Oligodendrocyte precursor cells; hpa_single_cell; unresolved; 7 TPM; blood/Progenitor cell; hpa_immune_monaco; vital

Cancer RNA. Glioblastoma Multiforme (validation): 50/58 (86.2%); Testicular Germ Cell Tumor (TCGA): 68/133 (51.1%); Rectum Adenocarcinoma (validation): 29/207 (14.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Reconsideration. Review diffuse RNA and missing reliable protein evidence rather than selecting the largest reproductive value.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZMV8 | HPA portal (live; not the pinned values)

ZNF735 | Neither / Low

ENSG00000223614

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.2 nTPM; brain/excitatory neurons; hpa_single_cell_tissue; vital; 0.5159 TPM; blood/CD4_NAIVE; dice_cd4_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 7/133 (5.3%); Glioblastoma Multiforme (validation): 2/58 (3.4%); Liver Hepatocellular Carcinoma (validation): 4/231 (1.7%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt P0CB33 | HPA portal (live; not the pinned values)

ZNF813 | Neither / Antibody

ENSG00000198346

Decision. Primary/curated antibody evidence needs resolution.

Normal RNA / IHC. 21.3 nTPM; liver/fibroblasts; hpa_single_cell_tissue; vital; 16.1 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Glioblastoma Multiforme (validation): 57/58 (98.3%); Breast Invasive Carcinoma (validation): 46/50 (92.0%); Prostate Adenocarcinoma (TCGA): 283/480 (59.0%)

Cancer IHC. cervical cancer: 10/12 (83.3%); colorectal cancer: 9/12 (75.0%)

Biology. May be involved in transcriptional regulation

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6ZN06 | HPA portal (live; not the pinned values)

ZPBP2 | Neither / Cellular

ENSG00000186075

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 6.2 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 6.855 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 3/133 (2.3%); Cervical Squamous Cell Carcinoma and Endocervical Adenocarcinoma (TCGA): 6/283 (2.1%); Lung Adenocarcinoma (TCGA): 5/497 (1.0%)

Cancer IHC. breast cancer: 0/12 (0.0%); cervical cancer: 0/10 (0.0%)

Biology. Is implicated in sperm-oocyte interaction during fertilization

Curated tissue note. Expressed specifically in testis

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q6X784 | HPA portal (live; not the pinned values)

ENSG00000259060 | Neither / Low

ENSG00000259060

Decision. Insufficient affirmative reproductive evidence under the 5 nTPM/protein-support admission rule.

Normal RNA / IHC. 0.6 nTPM; testis/macrophages; hpa_single_cell_tissue; vital; 0.08142 TPM; blood/MONOCYTES; dice_monocytes; vital

Cancer RNA. Testicular Germ Cell Tumor (TCGA): 1/133 (0.8%); Bladder Urothelial Carcinoma (TCGA): 0/169 (0.0%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

ENSG00000259316 | Neither / Unassessed

ENSG00000259316

Decision. Identity or measurement coverage is insufficient.

Normal RNA / IHC. 1.07 TPM; blood/B_CELL_NAIVE; dice_b_cell_naive; vital

Cancer RNA. No exact-ID RNA coverage in the HPA cancer snapshot

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. PCNA-binding protein that acts as a regulator of DNA repair during DNA replication. Following DNA damage, the interaction with PCNA is disrupted, facilitating the interaction between monoubiquitinated PCNA and the translesion DNA synthesis DNA polymerase eta (POLH) at stalled replisomes, facilitating the bypass of replication-fork-blocking lesions. Also acts as a regulator of centrosome number

Curated tissue note. Expressed predominantly in liver, pancreas and placenta. Not detected in heart or brain. Highly expressed in a number of tumors, especially esophageal tumors, in anaplastic thyroid carcinomas, adrenocortical ... [full text in table]

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt Q15004 | HPA portal (live; not the pinned values)

Shared UniProt entry: annotation is not independently proven for each encoding locus.

ENSG00000283205 | Neither / Screening

ENSG00000283205

Decision. Other nomination, coverage or screening requirements remain unmet.

Normal RNA / IHC. 0.5 nTPM; salivary gland/serous glandular cells; hpa_single_cell_tissue; protected; 0.7721 TPM; blood/CD8_STIM; dice_cd8_stim; vital

Cancer RNA. Bladder Urothelial Carcinoma (TCGA): 1/169 (0.6%); Rectum Adenocarcinoma (validation): 1/207 (0.5%); Breast Invasive Carcinoma (TCGA): 0/1022 (0.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

HPA portal (live; not the pinned values)

ENSG00000283599 | Neither / Cellular

ENSG00000283599

Decision. Cell-resolved or immune RNA conflicts require review.

Normal RNA / IHC. 10.3 nTPM; brain/oligodendrocytes; hpa_single_cell_tissue; vital; 1.32 TPM; blood/NK; dice_nk; vital

Cancer RNA. Liver Hepatocellular Carcinoma (TCGA): 35/362 (9.7%); Bladder Urothelial Carcinoma (TCGA): 9/169 (5.3%); Skin Cuteneous Melanoma (TCGA): 3/99 (3.0%)

Cancer IHC. No exact-ID IHC coverage in the HPA cancer snapshot

Biology. No functional description is linked by an exact Ensembl cross-reference in this reviewed UniProt snapshot.

Therapeutic evidence. No trial link in the curated intake; not an exhaustive negative search.

UniProt A0A1B0GWI6 | HPA portal (live; not the pinned values)