|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Gene Symbol | Name | N° of hits | Gene ID | Synonyms | Subcellular location | function | tissue specifity | disease |
| GPM6B | Neuronal membrane glycoprotein M6B | **23** | 2824 | M6B | integral membrane | proteolipid protein family; cellular housekeeping functions (trafficking and cell-to-cell communication); nervous system development | neuron, most brain regions |  |
| BAP31 | B-cell receptor-associated protein 31 | **10** | 10134 | BCAP31, DXS1357E | plasma membrane, ER and Golgi membrane, cytosol | transport of membrane proteins in ER to Golgi (ER-quality control compartment); caspase 8-mediated apoptosis | ubiquitous | BAP31 is deleted in the chromosome Xq28 deletion syndrome |
| CD320 | CD320 molecule, Transcobalamin receptor | **2** | 51293 | TCblR, 8D6A | cell surface; ER; integral membrane | transcobalamin receptor mediates VitaminB12 uptake; B-cell proliferation and immunoglobin secretion |  | methylmalonic aciduria type TCblR (MMATC) |
| CYB5B | Cytochrome b5 type B | **2** | 80777 | CYB5M, OMB5 | mitochondrion outer membrane | cytochrome b5 functions as electron carrier | lymphoma prostate cancer |  |
| GPM6A | Neuronal membrane glycoprotein M6A | **2** | 2823 | M6A | integral membrane; cell surface | calcium ion transmembrane transport |  |  |
| TSPAN7 | Tetraspanin 7 | **2** | 7102 | A15, DXS1692E, MXS1, TM4SF2 | integral plasma membrane, cell-surface protein | tetraspanin family; glycoprotein; signal transduction in cell development activation, growth, motility; neurite outgrowth | T cell, myelotic leukemia cells | X-linked mental retardation and neuropsychiatric disease e.g. Huntington's chorea |
| APR-3 | Apoptosis-related protein 3 | **1** | 51374 | C2orf28 | plasma membrane | apoptosis; hematopoietic development and differentiation | hematopoietic cell lines; upregulated in several tumor cell lines |  |
| B3GNT1 | N-acetyllactosaminide beta-1,3-N-acetylglucosaminyl-transferase | **1** | 11041 | B3GNT6 | Golgi apparatus membrane; integral membrane | catalytic activity; protein modification + glycosylation; synthesis or the elongation of the linear poly-N-acetyl-lactosaminoglycans | heart, brain, skeletal muscle and kidney and to a lesser extent in placenta, pancreas, spleen, prostate, testis, ovary, small intestine and colon. |  |
| CHN1 | Chimerin 1 | **1** | 1123 | ARHGAP2, CHN | cytosol | GTPase-activating protein; neuronal signal-transduction mechanisms | neurons | DURS2 syndrome (motility disorder; retraction syndrome) |
| CLDN10 | Claudin 10 | **1** | 9071 |  | membrane cell junction | tight junction; calcium-independent cell-adhesion activity | Liver, skeletal muscle | primary hepatocellular carcinoma, cervix carcinoma |
| HSPA9 | Heat shock 70kDa protein 9 | **1** | 3313 | mortalin | mitochondrion, ER, plasma membrane; cytoplasmic vesicles, nucleus | cell proliferation; cellular aging; may act as chaperone; ATP-binding; import nuclear-encoded proteins to mitochondria |  | mutations of HSPA9 higher risk of Parkinson's disease; Mortalin regulated by APOE in AD |
| ITGB1 | Integrin, beta 1 | **1** | 3688 | FNRB, MDF2, MSK12 | plasma membrane, cell surface | membrane receptor; cell adhesion; embryogenisis, hemostasis, tissue repair; immune response | Isoform beta-1A widely expressed, other isoforms coexpressed with restricted distribution | seems to enhance angiogenesis in Kaposi's sarcoma lesions by an interaction with extracellular HIV-1 Tat protein  |
| OCIAD1 | OCIA domain containing 1 | **1** | 54940 | OCIA | endosome, mitochondion | ovarian cancer recurrence, tumour metastasis | ISO\*1: testis, brain, placenta, ovary, prostate, mammary gland; ISO2 CNS, brain, cerebellum, spinal cord |  |
| PEBP1 | Phosphatidyl-ethanolamine binding protein 1 | **1** | 5037 | PBP, PEBP | cytoplasm, rER golgi, cell surface, mitochondrial outer membrane, | ATP binding; mitogen-activated protein kinase; brain development; involved in acetylcholine, cAMP and MAPKKK processes | neuron, synaptosome; placenta, brain, lung, liver… | adenocarcinoma |
| PH4 | Hypoxia-inducible factor (HIF) prolyl 4-hydroxylase | **1** | 54681 | P4HTM | transmembrane ER | calcium and iron ion binding, oxidoreductase activity (cellular oxigen sensor) | adult pancreas, heart, skeletal muscle, brain, placenta, kidney and adrenal gland; fibroblasts |  |
| PMEPA1 | Transmembrane prostate androgen-induced protein | **1** | 56937 | STAG1, TMEPAI | integral membrane, plasma membrane | androgen receptor signaling pathway, NEDD4 mediated interaction | prostate, ovary | inflamatory pathways in digestive cancers |
| VSIG4 | V-set and immunoglobulin domain containing 4 | **1** | 11326 | CRIg, Z39IG | integral membrane | negative regulation of T cell proliferation; interleucin protcution inhibitor | resting macrophage, lung, placenta and fetal tissues (abundantly) |  |

\*ISO = isoform