

Common Glycoproteins Identified in All Thyroid Cancer Cells

Swiss-Prot Accession Number	Average Spectra Counts	Protein Name	Subcellular location	#Trans-membrane regions	Cd Antigen Name	Gene Name
O00115	30.1	Deoxyribonuclease-2-alpha, Deoxyribonuclease II alpha, DNase II alpha, Acid DNase, Lysosomal DNase II, R31240_2	Lysosome	0		DNASE2, DNASE2A, DNL2
O00754	27.7	Lysosomal alpha-mannosidase, Laman, Lysosomal acid alpha-mannosidase, Mannosidase alpha class 2B member 1, Mannosidase, alpha B	Lysosome	0		MAN2B1, LAMAN, MANB
O14773	87.2	Tripeptidyl-peptidase 1, TPP-1, Tripeptidyl-peptidase I, TPP-I, Tripeptidyl aminopeptidase, Lysosomal pepstatin-insensitive protease, LPIC, Cell growth-inhibiting gene 1 protein	Lysosome, Melanosome, Identified by mass spectrometry in melanosome fractions from stage I to stage IV.	0		TPP1, CLN2, GIG1, UNQ267/PRO304
P01033	12.5	Metalloproteinase inhibitor 1, Tissue inhibitor of metalloproteinases, TIMP-1, Erythroid-potentiating activity, EPA, Fibroblast collagenase inhibitor, Collagenase inhibitor	Secreted	0		TIMP1
P04062	56.1	Glucosylceramidase, Beta-glucocerebrosidase, Acid beta-glucosidase, D-glucosyl-N-acylsphingosine glucohydrolase, Alglucerase, Imiglucerase	Lysosome membrane, Peripheral membrane protein, Interaction with saposin-C promotes membrane association.	0		GBA, GC, GLUC
P06756	117.1	Integrin alpha-V, Vitronectin receptor subunit alpha	Cell membrane, Single-pass type I membrane protein	1	CD51	ITGAV, MSK8, VNRA
P06865	117.1	Beta-hexosaminidase subunit alpha, N-acetyl-beta-glucosaminidase subunit alpha, Beta-N-acetylhexosaminidase subunit alpha, Hexosaminidase subunit A	Lysosome	0		HEXA
P07339	504.1	Cathepsin D	Lysosome, Melanosome, Identified by mass spectrometry in melanosome fractions from stage I to stage IV.	0		CTSD, CPSD
P07602	526.1	Proactivator polypeptide	Lysosome	0		PSAP, GLBA, SAP1
P07686	137.2	Beta-hexosaminidase subunit beta, N-acetyl-beta-glucosaminidase subunit beta, Beta-N-acetylhexosaminidase subunit beta, Hexosaminidase subunit B, Cervical cancer proto-oncogene 7 protein, HCC-7	Lysosome	0		HEXB, HCC7

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P07858	146	Cathepsin B, Cathepsin B1, APP secretase, APPS	Lysosome, Melanosome, Identified by mass spectrometry in melanosome fractions from stage I to stage IV.	0		CTSB, CPSB
P07942	73.7	Laminin subunit beta-1, Laminin B1 chain	Secreted, Extracellular space, Extracellular matrix, Basement membrane, Major component.	0		LAMB1
P08174	14	Complement decay-accelerating factor	Cell membrane, Single-pass type I membrane protein, Cell membrane, Lipid-anchor, GPI-anchor	0	CD55	CD55, CR, DAF
P10253	179.2	Lysosomal alpha-glucosidase, Acid maltase, Aglucosidase alfa	Lysosome	0		GAA
P10619	97.9	Lysosomal protective protein, Cathepsin A, Carboxypeptidase C, Protective protein for beta-galactosidase	Lysosome	0		CTSA, PPGB
P11117	16.5	Lysosomal acid phosphatase, LAP	Lysosome membrane, Single-pass membrane protein, Lysosome lumen, The soluble form arises by proteolytic processing of the membrane-bound form.	1		ACP2
P11279	44	Lysosome-associated membrane glycoprotein 1, LAMP-1, CD107 antigen-like family member A	Cell membrane, Single-pass type I membrane protein, Endosome membrane, Single-pass type I membrane protein, Lysosome membrane, Single-pass type I membrane protein, This protein shuttles between lysosomes, endosomes, and the plasma membrane.	1	CD107a	LAMP1
P11717	15.9	Cation-independent mannose-6-phosphate receptor, CI Man-6-P receptor, CI-MPR, M6PR, Insulin-like growth factor 2 receptor, Insulin-like growth factor II receptor, IGF-II receptor, M6P/IGF2 receptor, M6P/IGF2R, 300 kDa mannose 6-phosphate receptor, MPR 300	Lysosome membrane, Single-pass type I membrane protein	1	CD222	IGF2R, MPRI
P13284	22.8	Gamma-interferon-inducible lysosomal thiol reductase, Gamma-interferon-inducible protein IP-30	Lysosome	0		IFI30, GILT
P13473	32.6	Lysosome-associated membrane glycoprotein 2, LAMP-2, CD107 antigen-like family member B	Cell membrane, Single-pass type I membrane protein, Endosome membrane, Single-pass type I membrane protein, Lysosome membrane, Single-pass type I membrane protein, This protein shuttles between lysosomes, endosomes, and the plasma membrane.	1	CD107b	LAMP2

Common Glycoprotein in All

P13987	150.9	CD59 glycoprotein, Membrane attack complex inhibition factor, MACIF, MAC-inhibitory protein, MAC-IP, Protectin, MEM43 antigen, Membrane inhibitor of reactive lysis, MIRL, 20 kDa homologous restriction factor, HRF-20, HRF20, 1F5 antigen	Cell membrane, Lipid-anchor, GPI-anchor, Secreted, Soluble form found in a number of tissues.	0	CD59	CD59, MIC11, MIN1, MIN2, MIN3, MSK21
P14314	161	Glucosidase 2 subunit beta, Glucosidase II subunit beta, Protein kinase C substrate, 60.1 kDa protein, heavy chain, PKCSH, 80K-H protein	Endoplasmic reticulum	0		PRKCSH, G19P1
P15289	44.3	Arylsulfatase A, ASA, Cerebroside-sulfatase	Lysosome	0		ARSA
P15586	114.5	N-acetylglucosamine-6-sulfatase, G6S, Glucosamine-6-sulfatase	Lysosome	0		GNS
P16070	104.7	CD44 antigen, Phagocytic glycoprotein I, PGP-1, HUTCH-I, Extracellular matrix receptor-III, ECMR-III, GP90 lymphocyte homing/adhesion receptor, Hermes antigen, Hyaluronate receptor, Heparan sulfate proteoglycan, Epican, CDw44	Cell membrane, Single-pass type I membrane protein	1	CD44	CD44, LHR, MDU2, MDU3, MIC4
P16278	63.7	Beta-galactosidase, Acid beta-galactosidase, Lactase, Elastin receptor 1	Lysosome, Cytoplasm, Perinuclear region, Localized to the perinuclear area of the cytoplasm but not to lysosomes.	0		GLB1, ELNR1
P17050	45.8	Alpha-N-acetylgalactosaminidase, Alpha-galactosidase B	Lysosome	0		NAGA
P17900	21.9	Ganglioside GM2 activator, GM2-AP, Cerebroside sulfate activator protein, Shingolipid activator protein 3, SAP-3	Lysosome	0		GM2A
P18084	20.1	Integrin beta-5	Cell membrane, Single-pass type I membrane protein	1		ITGB5
P20933	19.8	N(4)-(beta-N-acetylglucosaminyl)-L-asparaginase, Glycosylasparaginase, Aspartylglucosaminidase, AGA, N4-(N-acetyl-beta-glucosaminyl)-L-asparagine amidase	Lysosome	0		AGA
P21589	40.7	5'-nucleotidase, Ecto-5'-nucleotidase, 5'-NT	Cell membrane, Lipid-anchor, GPI-anchor	0	CD73	NT5E, NT5, NTE
P34059	26.6	N-acetylgalactosamine-6-sulfatase, N-acetylgalactosamine-6-sulfate sulfatase, Galactose-6-sulfate sulfatase, GalNAc6S sulfatase, Chondroitinsulfatase, Chondroitinase	Lysosome	0		GALNS
P35613	75.3	Basigin, Leukocyte activation antigen M6, Collagenase stimulatory factor, Extracellular matrix metalloproteinase inducer, EMMPRIN, 5F7, Tumor cell-derived collagenase stimulatory factor, TCSF, OK blood group antigen	Cell membrane, Single-pass type I membrane protein, Melanosome, Colocalizes with SLC16A1 and SLC16A8 (By similarity). Identified by mass spectrometry in melanosome fractions from stage I to stage IV.	1	CD147	BSG, UNQ6505/P RO21383

Common Glycoprotein in All

P43121	61.5	Cell surface glycoprotein MUC18, Melanoma-associated antigen MUC18, Melanoma cell adhesion molecule, Melanoma-associated antigen A32, S-endo 1 endothelial-associated antigen, Cell surface glycoprotein P1H12	Cell membrane, Single-pass type I membrane protein	1	CD146	MCAM, MUC18
P50897	50.3	Palmitoyl-protein thioesterase 1, PPT-1, Palmitoyl-protein hydrolase 1	Lysosome	0		PPT1, PPT
P53634	58.8	Dipeptidyl-peptidase 1, Dipeptidyl-peptidase I, DPP-I, DPPI, Cathepsin C, Cathepsin J, Dipeptidyl transferase	Lysosome	0		CTSC, CPPI
P61916	105.6	Epididymal secretory protein E1, Niemann-Pick disease type C2 protein, hE1	Secreted	0		NPC2
Q02809	55.6	Procollagen-lysine,2-oxoglutarate 5-dioxygenase 1, Lysyl hydroxylase 1, LH1	Rough endoplasmic reticulum membrane, Peripheral membrane protein	0		PLOD1, LLH, PLOD
Q08380	104.9	Galectin-3-binding protein, Lectin galactoside-binding soluble 3-binding protein, Mac-2-binding protein, Mac-2 BP, MAC2BP, Tumor-associated antigen 90K, Basement membrane autoantigen p105	Secreted, Secreted, Extracellular space, Extracellular matrix	0		LGALS3BP, M2BP
Q13510	40	Acid ceramidase, AC, Acylsphingosine deacylase, N-acylsphingosine amidohydrolase, Putative 32 kDa heart protein, PHP32	Lysosome	0		ASAH1, ASAH
Q15758	7.1	Neutral amino acid transporter B(0), ATB(0), Sodium dependent neutral amino acid transporter type 2, RD114/simian type D retrovirus receptor, Baboon M7 virus receptor, Solute carrier family 1 member 5	Cell membrane, Multi-pass membrane protein, Melanosome, Identified by mass spectrometry in melanosome fractions from stage I to stage IV.	10		SLC1A5, ASCT2, M7V1, RDR, RDRC
Q5ZPR3	19.8	CD276 antigen, Costimulatory molecule, B7 homolog 3, B7-H3, 4lg-B7-H3	Cell membrane, Single-pass type I membrane protein	1	CD276	CD276, B7H3, PSEC0249, UNQ309/PRO352
Q8NBJ7	45.8	Sulfatase-modifying factor 2, C-alpha-formylglycine-generating enzyme 2	Endoplasmic reticulum lumen	0		SUMF2, PSEC0171, UNQ1968/PRO4500
Q8NCC3	18.3	1-O-acylceramide synthase, ACS, Lysosomal phospholipase A2, Lysophospholipase 3, LPLA2, LCAT-like lysophospholipase, LLPL	Lysosome, Secreted	0		LYPLA3, UNQ341/PRO540
Q92820	92.5	Gamma-glutamyl hydrolase, Gamma-Glu-X carboxypeptidase, Conjugase, GH	Secreted, Extracellular space, Lysosome, Melanosome, While its intracellular location is primarily the lysosome, most of the enzyme activity is secreted. Identified by mass spectrometry in melanosome fractions from stage I to stage IV.	0		GGH

Common Glycoprotein in All

Q96HE7	166.6	ERO1-like protein alpha, ERO1-Lalpha, ERO1-L, Oxidoreductin-1-Lalpha, Endoplasmic oxidoreductin-1-like protein	Endoplasmic reticulum membrane, Peripheral membrane protein, The association with TXNDC4 is essential for its retention in the endoplasmic reticulum.	0		ERO1L, UNQ434/PRO865
Q99519	45.7	Sialidase-1, Lysosomal sialidase, N-acetyl-alpha-neuraminidase 1, Acetylneuraminyl hydrolase, G9 sialidase	Lysosome membrane, Peripheral membrane protein, Lysosome lumen, Cell membrane, Cytoplasmic vesicle, Localized not only on the inner side of the lysosomal membrane and in the lysosomal lumen, but also on the plasma membrane and in intracellular vesicles.	0		NEU1, NANH
Q9P2B2	8.9	Prostaglandin F2 receptor negative regulator, Prostaglandin F2-alpha receptor regulatory protein, Prostaglandin F2-alpha receptor-associated protein, CD9 partner 1, CD9P-1	Endoplasmic reticulum membrane, Single-pass type I membrane protein, Golgi apparatus, trans-Golgi network membrane, Single-pass type I membrane protein	1	CD315	PTGFRN, CD9P1, FPRP, KIAA1436
Q9UBR2	85.7	Cathepsin Z, Cathepsin X, Cathepsin P	Lysosome	0		CTSZ
Q9UHG3	21.7	Prenylcysteine oxidase 1, Prenylcysteine lyase	Lysosome	0		PCYOX1, KIAA0908, PCL1, UNQ597/PRO1183
Q9UHL4	79.1	Dipeptidyl-peptidase 2, Dipeptidyl-peptidase II, DPP II, Dipeptidyl aminopeptidase II, Quiescent cell proline dipeptidase, Dipeptidyl peptidase 7	Lysosome, Cytoplasmic vesicle	0		DPP7, DPP2, QPP
Q9Y4L1	285.7	Hypoxia up-regulated protein 1, 150 kDa oxygen-regulated protein, Orp150	Endoplasmic reticulum lumen	0		HYOU1, ORP150

Unique Glycoproteins Identified in FTC-133 Cell Line

Swiss-Prot Accession Number	FTC-p16 Spectra Counts	FTC-p17 Spectra Counts	Protein Name	Subcellular location	#Trans-membrane regions	Cd Antigen Name	Gene Name
P04439	12		HLA class I histocompatibility antigen, A-3 alpha chain, MHC class I antigen A*3	Membrane, Single-pass type I membrane protein	1		HLA-A, HLAA
P18827	16	10	Syndecan-1, SYND1	Membrane, Single-pass type I membrane protein	1	CD138	SDC1, SDC
P49755	13		Transmembrane emp24 domain-containing protein 10, 21 kDa transmembrane-trafficking protein, Transmembrane protein Tmp21, Tmp-21-I, p24delta, S31III125, S31I125	Golgi apparatus membrane, Single-pass type I membrane protein, Melanosome, Identified by mass spectrometry in melanosome fractions from stage I to stage IV.	1		TMED10, TMP21
P55290	19	7	Cadherin-13, Truncated cadherin, T-cadherin, T-cad, Heart cadherin, H-cadherin, P105	Cell membrane, Lipid-anchor, GPI-anchor	0		CDH13, CDHH
Q04941	6		Proteolipid protein 2, Intestinal membrane A4 protein, Differentiation-dependent protein A4	Membrane, Multi-pass membrane protein	4		PLP2, A4
Q9BVK6	10		Transmembrane emp24 domain-containing protein 9, Glycoprotein 25L2	Endoplasmic reticulum membrane, Single-pass type I membrane protein	1		TMED9, GP25L2
Q9UBP4	6	6	Dickkopf-related protein 3, Dickkopf-3, Dkk-3, hDkk-3	Secreted	0		DKK3, REIC, UNQ258/PR O295

Unique Proteins Identified in TPC-1 Cell Line

Swiss-Prot Accession Number	TPC-p13 Spectra Counts	TPC-p15 Spectra Counts	Protein Name	Subcellular location	#Trans-membrane regions	Cd Antigen Name	Gene Name
O14786		9	Neuropilin-1, Vascular endothelial cell growth factor 165 receptor	Cell membrane, Single-pass type I membrane protein, Secreted	1	CD304	NRP1, NRP, VEGF165R
P01024		5	Complement C3, C3 and PZP-like alpha-2-macroglobulin domain-containing protein 1	Secreted	0		C3, CPAMD1
P05997	10	9	Collagen alpha-2(V) chain	Secreted, Extracellular space, Extracellular matrix	0		COL5A2
P20645		2	Cation-dependent mannose-6-phosphate receptor, CD Man-6-P receptor, CD-MPR, 46 kDa mannose 6-phosphate receptor, MPR 46	Lysosome membrane, Single-pass type I membrane protein	1		M6PR, MPR46, MPRD
P28827	2	14	Receptor-type tyrosine-protein phosphatase mu, Protein-tyrosine phosphatase mu, R-PTP-mu	Membrane, Single-pass type I membrane protein	1		PTPRM, PTPRL1
P30508	31	5	HLA class I histocompatibility antigen, Cw-12 alpha chain, MHC class I antigen Cw*12	Membrane, Single-pass type I membrane protein	1		HLA-C, HLAC
P30530		3	Tyrosine-protein kinase receptor UFO, AXL oncogene	Membrane, Single-pass type I membrane protein	1		AXL, UFO
P30685	6	3	HLA class I histocompatibility antigen, B-35 alpha chain, MHC class I antigen B*35	Membrane, Single-pass type I membrane protein	1		HLA-B, HLAB
P54289	3	1	Voltage-dependent calcium channel subunit alpha-2/delta-1, Voltage-gated calcium channel subunit alpha-2/delta-1	Membrane, Single-pass type I membrane protein	1		CACNA2D1, CACNL2A, CCHL2A, MHS3
P78310	5	4	Coxsackievirus and adenovirus receptor, Coxsackievirus B-adenovirus receptor, HCVADR, hCAR, CVB3-binding protein	Cell membrane, Single-pass type I membrane protein, Cell junction, Tight junction, Cell junction, Adherens junction, Basolateral cell membrane, Single-pass type I membrane protein, In epithelial cells localizes to the apical junction complex composed of tight and adherens junctions. In airway epithelial cells localized to basolateral membrane but not to apical surface.	1		CXADR, CAR

Unique in TPC-1

P78324	15	20	Tyrosine-protein phosphatase non-receptor type substrate 1, SHP substrate 1, SHPS-1, Inhibitory receptor SHPS-1, Signal regulatory protein alpha-1, Sirp-alpha-1, Sirp-alpha-2, Sirp-alpha-3, MyD-1 antigen, Brain Ig-like molecule with tyrosine-based activation motifs, Bit, Macrophage fusion receptor, p84, CD172 antigen-like family member A	Membrane, Single-pass type I membrane protein	1	CD172a	SIRPA, BIT, MFR, MYD1, PTPNS1, SHPS1, SIRP
Q12841	27	11	Follistatin-related protein 1, Follistatin-like 1	Secreted	0		FSTL1, FRP
Q7Z3B1	2	1	Neuronal growth regulator 1	Cell membrane, Lipid-anchor, GPI-anchor	0		NEGR1, UNQ2433/P, RO4993
Q8NBK3	13	5	Sulfatase-modifying factor 1, C-alpha-formylglycine-generating enzyme 1	Endoplasmic reticulum lumen	0		SUMF1, FGE, PSEC0152, UNQ3037/P, RO9852
Q92484	4	20	Acid sphingomyelinase-like phosphodiesterase 3a, ASM-like phosphodiesterase 3a	Secreted	0		SMPDL3A, ASML3A
Q92859		3	Neogenin	Cell membrane, Single-pass type I membrane protein	1		NEO1, NGN
Q96D42	18	31	Hepatitis A virus cellular receptor 1, HAVcr-1, T-cell immunoglobulin and mucin domain-containing protein 1, TIMD-1, T-cell membrane protein 1, TIM-1, TIM	Membrane, Single-pass type I membrane protein	1		HAVCR1, TIM1, TIMD1
Q9HB40	6	18	Retinoid-inducible serine carboxypeptidase, Serine carboxypeptidase 1	Secreted	0		SCPEP1, RISC, SCP1, MSTP034, UNQ265/PR, O302
Q9UNN8	5	4	Endothelial protein C receptor, Endothelial cell protein C receptor, Activated protein C receptor, APC receptor	Membrane, Single-pass type I membrane protein	1	CD201	PROCR, EPCR

Unique Proteins Identified in XTC-1 Cell Line

Swiss-Prot Accession Number	XTC-p13 Spectra Counts	XTC-p29 Spectra Counts	Protein Name	Subcellular location	#Trans-membrane regions	Cd Antigen Name	Gene Name
O15118	5	1	Niemann-Pick C1 protein	Late endosome membrane, Multi-pass membrane protein, Lysosome membrane, Multi-pass membrane protein	11		NPC1
P04843	2	1	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase subunit 1, Dolichyl-diphosphooligosaccharide--protein glycosyltransferase 67 kDa subunit, Ribophorin-1, Ribophorin I, RPN-I	Endoplasmic reticulum membrane, Single-pass type I membrane protein, Melanosome, Identified by mass spectrometry in melanosome fractions from stage I to stage IV.	1		RPN1
P05783	46	1	Keratin, type I cytoskeletal 18, Cytokeratin-18, CK-18, Keratin-18, K18, Cell proliferation-inducing gene 46 protein	Cytoplasm, Perinuclear region	0		KRT18, CYK18, PIG46
P06276	10	54	Cholinesterase, Acylcholine acylhydrolase, Choline esterase II, Butyrylcholine esterase, Pseudocholinesterase		0		BCHE, CHE1
P08571	43	84	Monocyte differentiation antigen CD14, Myeloid cell-specific leucine-rich glycoprotein	Cell membrane, Lipid-anchor, GPI-anchor	0	CD14	CD14
P09603	1	10	Macrophage colony-stimulating factor 1, CSF-1, MCSF, M-CSF, Lanimostim	Cell membrane, Single-pass membrane protein, Secreted, Extracellular space	1		CSF1
P0C0L5		26	Complement C4-B, Basic complement C4, C3 and PZP-like alpha-2-macroglobulin domain-containing protein 3	Secreted	0		C4B, CO4, CPAMD3
P15941	18	20	Mucin-1, MUC-1, Polymorphic epithelial mucin, PEM, PEMT, Episialin, Tumor-associated mucin, Carcinoma-associated mucin, Tumor-associated epithelial membrane antigen, EMA, H23AG, Peanut-reactive urinary mucin, PUM, Breast carcinoma-associated antigen DF3	Apical cell membrane, Single-pass type I membrane protein, Exclusively located in the apical domain of the plasma membrane of highly polarized epithelial cells. After endocytosis, internalized and recycled to the cell membrane. Located to microvilli and to the tips of long filopodial protusions., Secreted, Secreted, Secreted, Cell membrane, Cytoplasm, Nucleus, On EGF and PDGFRB stimulation, transported to the nucleus through interaction with CTNNB1, a process which is stimulated by phosphorylation. On HRG stimulation, colocalizes with JUP/gamma-catenin at the nucleus.	1	CD227	MUC1, PUM
P31431		9	Syndecan-4, SYND4, Amphiglycan, Ryudocan core protein	Membrane, Single-pass type I membrane protein	1		SDC4

P41222	14	26	Prostaglandin-H2 D-isomerase, Lipocalin-type prostaglandin-D synthase, Glutathione-independent PGD synthetase, Prostaglandin-D2 synthase, PGD2 synthase, PGDS2, PGDS, Beta-trace protein, Cerebrin-28	Rough endoplasmic reticulum, Nucleus membrane, Golgi apparatus, Cytoplasm, Perinuclear region, Secreted, Detected on rough endoplasmic reticulum of arachnoid and meningioma cells. Localized to the nuclear envelope, Golgi apparatus, secretory vesicles and spherical cytoplasmic structures in arachnoid trabecular cells, and to circular cytoplasmic structures in meningeal macrophages and perivascular microglial cells. In oligodendrocytes, localized to the rough endoplasmic reticulum and nuclear envelope. In retinal pigment epithelial cells, localized to distinct cytoplasmic domains including the perinuclear region. Also secreted.	0		PTGDS, PDS
P48307		20	Tissue factor pathway inhibitor 2, TFPI-2, Placental protein 5, PP5	Secreted	0		TFPI2
P55285		5	Cadherin-6, Kidney cadherin, K-cadherin	Cell membrane, Single-pass type I membrane protein	1		CDH6
P61769	6	9	Beta-2-microglobulin	Secreted	0		B2M, CDABP009 2, HDCMA22P
Q02083	6	8	N-acylethanolamine-hydrolyzing acid amidase, N-acylsphingosine amidohydrolase-like, ASAH-like protein, Acid ceramidase-like protein	Lysosome	0		NAAA, ASAHL, PLT
Q02388		10	Collagen alpha-1(VII) chain, Long-chain collagen, LC collagen	Secreted, Extracellular space, Extracellular matrix, Basement membrane	0		COL7A1
Q05707		18	Collagen alpha-1(XIV) chain, Undulin	Secreted, Extracellular space, Extracellular matrix	0		COL14A1, UND
Q10588	3	28	ADP-ribosyl cyclase 2, Cyclic ADP-ribose hydrolase 2, cADPr hydrolase 2, Bone marrow stromal antigen 1, BST-1	Cell membrane, Lipid-anchor, GPI-anchor	0	CD157	BST1
Q10589	3	11	Bone marrow stromal antigen 2, BST-2, HM1.24 antigen	Golgi apparatus, trans-Golgi network, Cell membrane, Single-pass type II membrane protein, Cell membrane, Lipid-anchor, GPI-anchor	1	CD317	BST2
Q12805		45	EGF-containing fibulin-like extracellular matrix protein 1, Fibulin-3, FIBL-3, Fibrillin-like protein, Extracellular protein S1-5	Secreted	0		EFEMP1, FBLN3, FBNL

Unique in XTC-1

Q14508	17	40	WAP four-disulfide core domain protein 2, Major epididymis-specific protein E4, Epididymal secretory protein E4, Putative protease inhibitor WAP5	Secreted	0	WFDC2, HE4, WAP5
Q8IWA5	10	10	Choline transporter-like protein 2, Solute carrier family 44 member 2	Membrane, Multi-pass membrane protein	10	SLC44A2, CTL2, PSEC0210
Q8IZP9	6	14	G-protein coupled receptor 64, Epididymis-specific protein 6, He6 receptor	Cell membrane, Multi-pass membrane protein	7	GPR64, HE6, TM7LN2
Q8NFJ5	13	3	Retinoic acid-induced protein 3, G-protein coupled receptor family C group 5 member A, Retinoic acid-induced gene 1 protein, RAIG-1, Orphan G-protein-coupling receptor PEIG-1	Cell membrane, Multi-pass membrane protein, Cytoplasmic vesicle membrane, Multi-pass membrane protein, Localized in the plasma membrane and perinuclear vesicles.	7	GPRC5A, GPCR5A, RAI3, RAIG1
Q8TCT9		29	Minor histocompatibility antigen H13, Signal peptide peptidase, Presenilin-like protein 3, hIMP1 protein	Endoplasmic reticulum membrane, Multi pass membrane protein	7	HM13, H13, IMP1, PSL3, SPP, MSTP086
Q92823		7	Neuronal cell adhesion molecule, Nr-CAM, NgCAM-related cell adhesion molecule, Ng-CAM-related, hBravo	Cell membrane, Single-pass type I membrane protein	1	NRCAM, KIAA0343
Q9UMF0	2	15	Intercellular adhesion molecule 5, ICAM-5, Telencephalin	Membrane, Single-pass type I membrane protein	1	ICAM5, TLCN, TLN

Unique Proteins Identified in ARO Cell Line

Swiss-Prot Accession Number	ARO-p65 Spectra Counts	ARO-p67 Spectra Counts	Protein Name	Subcellular location	#Transmembrane regions	Cd Antigen Name	Gene Name
P02649	4	7	Apolipoprotein E, Apo-E	Secreted	0		APOE
P98160	7	5	Basement membrane-specific heparan sulfate proteoglycan core protein, HSPG, Perlecan, PLC	Secreted, Extracellular space, Extracellular matrix, Basement membrane	0		HSPG2
Q16790	6	32	Carbonic anhydrase 9, Carbonic anhydrase IX, CA-IX, CAIX, Carbonate dehydratase IX, Membrane antigen MN, P54/58N, Renal cell carcinoma-associated antigen G250, RCC-associated antigen G250, pMW1	Nucleus, Nucleus, Nucleolus, Cell membrane, Single-pass type I membrane protein, Cell projection, Microvillus membrane, Single-pass type I membrane protein, Found on the surface microvilli and in the nucleus, particularly in nucleolus.	1		CA9, G250, MN
P27701	2		CD82 antigen, Inducible membrane protein R2, C33 antigen, IA4, Metastasis suppressor Kangai 1, Suppressor of tumorigenicity-6, Tetraspanin-27, Tspan-27	Membrane, Multi-pass membrane protein	4	CD82	CD82, KAI1, SAR2, ST6, TSPAN27
Q02487		7	Desmocollin-2, Desmosomal glycoprotein II and III, Desmocollin-3	Cell membrane, Single-pass type I membrane protein, Cell junction, Desmosome	1		DSC2, CDHF2, DSC3
O94907		7	Dickkopf-related protein 1, Dickkopf-1, Dkk-1, hDkk-1, SK	Secreted	0		DKK1, UNQ492/PRO1008
P54753	2	14	Ephrin type-B receptor 3, Tyrosine-protein kinase receptor HEK-2, Tyrosine-protein kinase TYRO6	Membrane, Single-pass type I membrane protein	1		EPHB3, ETK2, HEK2, TYRO6
P98172	4	20	Ephrin-B1, EPH-related receptor tyrosine kinase ligand 2, LERK-2, ELK ligand, ELK-L	Membrane, Single-pass type I membrane protein	1		EFNB1, EFL3, EPLG2, LERK2
P52799	2	9	Ephrin-B2, EPH-related receptor tyrosine kinase ligand 5, LERK-5, HTK ligand, HTK-L	Membrane, Single-pass type I membrane protein	1		BTD
Q8NBJ4	4	6	Golgi membrane protein 1, Golgi phosphoprotein 2, Golgi membrane protein GP73	Golgi apparatus, cis-Golgi network membrane, Single-pass type II membrane protein, Early Golgi. Cycles via the cell surface and endosomes upon luminal pH disruption.	1		GOLM1, C9orf155, GOLPH2, PSEC0242, UNQ686/PRO1326

Unique in ARO

Q9Y251	2	7	Heparanase, Heparanase-1, Hpa1, Endo-glucuronidase	Lysosome membrane, Peripheral membrane protein, Secreted, Secreted, internalised and transferred to late endosomes/lysosomes as a proheparanase. In lysosomes, it is processed into the active form, the heparanase. The uptake or internalisation of proheparanase is mediated by HSPGs. Heparin appears to be a competitor and retain proheparanase in the extracellular medium.	0		HPSE, HEP, HPA, HPA1, HPR1, HPSE1, HSE1
P23229	10	6	Integrin alpha-6, VLA-6, CD49 antigen-like family member F	Membrane, Single-pass type I membrane protein	1	CD49f	ITGA6
O43278	10	23	Kunitz-type protease inhibitor 1, Hepatocyte growth factor activator inhibitor type 1, HAI-1	Secreted	0		SPINT1, HAI1, UNQ223/PRO256
Q16787	24	12	Laminin subunit alpha-3, Epiligrin 170 kDa subunit, E170, Nicein subunit alpha	Secreted, Extracellular space, Extracellular matrix, Basement membrane, Major component.	0		LAMA3, LAMNA
Q13753	6	4	Laminin subunit gamma-2, Laminin 5 gamma 2 subunit, Kalinin/nicein/epiligrin 100 kDa subunit, Laminin B2t chain, Cell-scattering factor 140 kDa subunit, CSF 140 kDa subunit, Large adhesive scatter factor 140 kDa subunit, Ladsin 140 kDa subunit	Secreted, Extracellular space, Extracellular matrix, Basement membrane, Major component.	0		LAMC2, LAMB2T, LAMNB2
P02750	1	2	Leucine-rich alpha-2-glycoprotein, LRG	Secreted	0		LRG1, LRG
Q08722	12	1	Leukocyte surface antigen CD47, Integrin-associated protein, IAP, Antigenic surface determinant protein OA3, Protein MER6	Cell membrane, Multi-pass membrane protein	5	CD47	CD47, MER6
Q04721	1	4	Neurogenic locus notch homolog protein 2, Notch 2, hN2	Cell membrane, Single-pass type I membrane protein, Nucleus, Following proteolytical processing NICD is translocated to the nucleus.	1		NOTCH2
P37198		7	Nuclear pore glycoprotein p62, 62 kDa nucleoporin	Nucleus, Nuclear pore complex, Central region of the nuclear pore, within the transporter. During mitotic cell division, it associates with the poles of the mitotic spindle.	0		NUP62
O00592	1		Podocalyxin-like protein 1	Membrane, Single-pass type I membrane protein	1		PODXL, PCLP, PCLP1
Q15223	1	5	Poliovirus receptor-related protein 1, Herpes virus entry mediator C, HveC, Nectin-1, Herpesvirus Ig-like receptor, HlgR	Cell membrane, Single-pass type I membrane protein, Cell membrane, Single-pass type I membrane protein, Secreted	1	CD111	PVRL1, HVEC, PRR1

Unique in ARO

O43490	3	3	Prominin-1, Prominin-like protein 1, Antigen AC133	Apical cell membrane, Multi-pass membrane protein, Cell projection, Microvillus membrane, Multi-pass membrane protein	5	CD133	PROM1, PROML1
P10586		2	Receptor-type tyrosine-protein phosphatase F, LAR protein, Leukocyte antigen related	Membrane, Single-pass type I membrane protein	1		PTPRF, LAR
Q9NPR2		3	Semaphorin-4B	Membrane, Single-pass type I membrane protein	1		SEMA4B, KIAA1745, SEMAC, UNQ749/PRO1480
P55011	3	4	Solute carrier family 12 member 2, Bumetanide-sensitive sodium-(potassium)-chloride cotransporter 1, Basolateral Na-K-Cl symporter	Membrane, Multi-pass membrane protein	12		
Q99523		3	Sortilin, Neurotensin receptor 3, NTR3, NT3, Glycoprotein 95, Gp95, 100 kDa NT receptor	Membrane, Single-pass type I membrane protein, Endoplasmic reticulum membrane, Single-pass type I membrane protein, Endosome membrane, Single-pass type I membrane protein, Golgi apparatus, Golgi stack membrane, Single-pass type I membrane protein, Lysosome membrane, Single-pass type I membrane protein, Nucleus membrane, Single-pass type I membrane protein, Cell membrane, Single-pass type I membrane protein, Lysosome membrane, Single-pass type I membrane protein, Localized to membranes of the endoplasmic reticulum, endosomes, Golgi stack, lysosomes and nucleus. A small fraction of the protein is also localized to the plasma membrane. May also be found in SLC2A4/GLUT4 storage vesicles (GSVs) in adipocytes. Localization to the plasma membrane in adipocytes may be enhanced by insulin.	1		SORT1
O60635	5		Tetraspanin-1, Tspan-1, Tetraspan NET-1, Tetraspanin TM4-C	Membrane, Multi-pass membrane protein	4		TSPAN1
O95858	5		Tetraspanin-15, Tspan-15, Transmembrane 4 superfamily member 15, Tetraspan NET-7	Membrane, Multi-pass membrane protein	4		TSPAN15, NET7, TM4SF15, UNQ677/PRO1311

Unique in ARO

O60637	6		Tetraspanin-3, Tspan-3, Transmembrane 4 superfamily member 8, Tetraspanin TM4-A	Membrane, Multi-pass membrane protein	4		TSPAN3, TM4SF8
P19075	66	40	Tetraspanin-8, Tspan-8, Transmembrane 4 superfamily member 3, Tumor-associated antigen CO-029	Membrane, Multi-pass membrane protein	4		TSPAN8, TM4SF3
P10646	4	4	Tissue factor pathway inhibitor, TFPI, Lipoprotein-associated coagulation inhibitor, LACI, Extrinsic pathway inhibitor, EPI	Secreted	0		TFPI, LACI, TFPI1
P02786		7	Transferrin receptor protein 1, TfR1, TfR, TR, Trfr, T9, p90	Cell membrane, Single-pass type II membrane protein, Melanosome, Identified by mass spectrometry in melanosome fractions from stage I to stage IV., Secreted	1	CD71	TFRC
P16422	68	97	Tumor-associated calcium signal transducer 1, Major gastrointestinal tumor-associated protein GA733-2, Epithelial cell surface antigen, Epithelial glycoprotein, EGP, Adenocarcinoma-associated antigen, KSA, KS 1/4 antigen, Cell surface glycoprotein Trop-1	Membrane, Single-pass type I membrane protein	1	CD326	TACSTD1, GA733-2, M1S2, M4S1, MIC18, TROP1
P02774		11	Vitamin D-binding protein, DBP, VDB, Group-specific component, Gc-globulin	Secreted	0		GC

Unique Proteins Identified in DRO-1 Cell Line

Swiss-Prot Accession Number	DRO-p54 Spectra Counts	DRO-p56 Spectra Counts	Protein Name	Subcellular location	#Trans-membrane regions	Cd Antigen Name	Gene Name
O60568	39	88	Procollagen-lysine,2-oxoglutarate 5-dioxygenase 3, Lysyl hydroxylase 3, LH3	Rough endoplasmic reticulum membrane, Peripheral membrane protein	0		PLOD3
O95857	1		Tetraspanin-13, Tspan-13, Transmembrane 4 superfamily member 13, Tetraspan NET-6	Membrane, Multi-pass membrane protein	4		O95857
P00750	11		Tissue-type plasminogen activator, t-plasminogen activator, t-PA, tPA	Secreted, Extracellular space	0		PLAT
P02787	273	56	Serotransferrin, Transferrin, Siderophilin, Beta-1-metal-binding globulin	Secreted	0		TF, PRO1400
P05090	5		Apolipoprotein D, Apo-D, ApoD	Secreted	0		APOD
P05154	2		Plasma serine protease inhibitor, Serpin A5, Protein C inhibitor, PCI, Plasminogen activator inhibitor 3, PAI-3, PAI3, Acrosomal serine protease inhibitor	Secreted	0		SERPINA5, PCI, PLANH3, PROCI
P07093	9	10	Glia-derived nexin, GDN, Protease nexin I, PN-1, Protease inhibitor 7	Secreted, Extracellular space	0		SERPINE2, PI7, PN1
P08294	54	30	Extracellular superoxide dismutase [Cu-Zn], EC-SOD	Secreted, Extracellular space, 99% of EC-SOD is anchored to heparan sulfate proteoglycans in the tissue interstitium, and 1% is located in the vasculature in equilibrium between the plasma and the endothelium.	0		SOD3
P10915	153	20	Hyaluronan and proteoglycan link protein 1, Proteoglycan link protein, Cartilage link protein, LP	Secreted, Extracellular space, Extracellular matrix	0		HAPLN1, CRTL1
P16112	34	20	Aggrecan core protein, Cartilage-specific proteoglycan core protein, CSPCP, Chondroitin sulfate proteoglycan core protein 1	Secreted, Extracellular space, Extracellular matrix	0		ACAN, AGC1, CSPG1, MSK16
P30464	8		HLA class I histocompatibility antigen, B-15 alpha chain, MHC class I antigen B*15	Membrane, Single-pass type I membrane protein	1		HLA-B, HLAB
Q12907		4	Vesicular integral-membrane protein VIP36, Lectin mannose-binding 2, Glycoprotein GP36b	Endoplasmic reticulum-Golgi intermediate compartment membrane, Single-pass type I membrane protein, Golgi apparatus membrane, Single-pass membrane protein, Endoplasmic reticulum membrane, Single-pass type I membrane protein	1		LMAN2, C5orf8

Unique in DRO

Q86YB8	22	24	ERO1-like protein beta, ERO1-Lbeta, Oxidoreductin-1-Lbeta, Endoplasmic oxidoreductin-1-like protein B	Endoplasmic reticulum membrane, Peripheral membrane protein, The association with TXNDC4 may be essential for its retention in the endoplasmic reticulum.	0		ERO1LB
Q8N474	21	2	Secreted frizzled-related protein 1, sFRP-1, Frizzled-related protein 1, FRP-1, Secreted apoptosis-related protein 2, SARP-2	Secreted, Cell membrane or extracellular matrix-associated. Released by heparin-binding.	0		SFRP1, FRP, FRP1, SARP2
Q96CG8	30	36	Collagen triple helix repeat-containing protein 1, NMTC1 protein	Secreted, Extracellular space, Extracellular matrix	0		CTHRC1, UNQ762/PRO1550
Q96JB6	12		Lysyl oxidase homolog 4, Lysyl oxidase-like protein 4, Lysyl oxidase-related protein C	Secreted, Extracellular space	0		LOXL4, LOXC
Q9NPH3	8		Interleukin-1 receptor accessory protein, IL-1 receptor accessory protein, IL-1RAcP	Cell membrane, Single-pass type I membrane protein, Secreted, Secreted, Secreted	1		IL1RAP
Q9Y2G5	9	35	GDP-fucose protein O-fucosyltransferase 2, Peptide-O-fucosyltransferase 2, O-FucT-2	Endoplasmic reticulum	0		POFUT2, C21orf80, FUT13, KIAA0958
Q9Y6C2	23	79	EMILIN-1, Elastin microfibril interface-located protein 1, Elastin microfibril interfacier 1	Secreted, Extracellular space, Extracellular matrix, Found mainly at the interface between amorphous elastin and microfibrils.	0		EMILIN1, EMI