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CD98 Rabbit pAb

Catalog # AP98769

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	P08195
Other Accession	P08195
Predicted	Rat, Pig, Human, Mouse, Rabbit
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57945
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CD98
Epitope Specificity	231-280/630
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the SLC3A transporter family.
SUBUNIT	Disulfide-linked heterodimer of a glycosylated heavy chain and a non-glycosylated light chain (SLC7A5, SLC7A6, SLCA7A7, SLC7A8, SLC7A10 or SLCA7A11). Colocalizes with cadherins. Interacts with FAM57A/CT120 and ICAM1. Constitutively and specifically associates with beta-1 integrins (alpha-2/beta-1, alpha-3/beta-1, alpha-5/beta-1 and alpha-6/beta-1), but minimally with alpha-4/beta-1.
Post-translational modifications	Phosphorylation on Ser-406; Ser-408 or Ser-410 and on Ser-527 or Ser-531 by ecto-protein kinases favors heterotypic cell-cell interactions.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene is a member of the solute carrier family and encodes a cell surface, transmembrane protein. The protein exists as the heavy chain of a heterodimer, covalently bound through di-sulfide bonds to one of several possible light chains. The encoded transporter plays a role in regulation of intracellular calcium levels and transports L-type amino acids. Alternatively spliced transcript variants, encoding different isoforms, have been characterized. [provided by RefSeq, Nov 2010].

Additional Information

Gene ID	6520
Other Names	4F2; 4F2HC; 4T2HC; CD98; CD98HC; MDU1; NACAE; 4F2_HUMAN; SLC3A2; 4F2 cell-surface antigen heavy chain (4F2hc); 4F2 heavy chain antigen; Lymphocyte activation antigen 4F2 large subunit; Solute carrier family 3 member 2; solute carrier family 3 (activators of dibasic and neutral amino acid transport), member 2; solute carrier family 3 (amino acid transporter heavy chain), member 2; antigen identified by monoclonal antibodies 4F2, TRA1.10, TROP4, and T43; antigen defined by monoclonal antibody 4F2; heavy

	chain; 4F2 heavy chain; CD98 heavy chain; monoclonal antibody 44D7; 4F2 cell-surface antigen heavy chain
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	SLC3A2 (HGNC:11026)
Synonyms	MDU1
Function	Acts as a chaperone that facilitates biogenesis and trafficking of functional transporter heterodimers to the plasma membrane. Forms heterodimers with SLC7 family transporters (SLC7A5, SLC7A6, SLC7A7, SLC7A8, SLC7A10 and SLC7A11), a group of amino-acid antiporters (PubMed:10574970, PubMed:10903140, PubMed:11557028, PubMed:30867591, PubMed:33298890, PubMed:33758168, PubMed:34880232, PubMed:9751058, PubMed:9829974, PubMed:9878049, PubMed:37918808). Heterodimers function as amino acid exchangers, the specificity of the substrate depending on the SLC7A subunit. Heterodimers SLC3A2/SLC7A6 or SLC3A2/SLC7A7 mediate the uptake of dibasic amino acids (PubMed:10903140, PubMed:9829974). Heterodimer SLC3A2/SLC7A11 functions as an antiporter by mediating the exchange of extracellular anionic L- cystine and intracellular L-glutamate across the cellular plasma membrane (PubMed:34880232). SLC3A2/SLC7A10 translocates small neutral L- and D-amino acids across the plasma membrane (By similarity). SLC3A2/SLC75 or SLC3A2/SLC7A8 translocate neutral amino acids with broad specificity, thyroid hormones and L-DOPA (PubMed:10574970, PubMed:11389679, PubMed:11557028, PubMed:11564694, PubMed:11742812, PubMed:12117417, PubMed:12225859, PubMed:12716892, PubMed:15980244, PubMed:30867591, PubMed:33298890, PubMed:33758168). SLC3A2 is essential for the plasma membrane localization, stability, and transport activity of SLC7A5 and SLC7A8 (PubMed:10391915, PubMed:10574970, PubMed:11311135, PubMed:15769744, PubMed:33066406, PubMed:37918808). When associated with LAPTM4B, the SLC3A2/SLC7A5 heterodimer is recruited to lysosomes to promote leucine uptake into these organelles, and thereby mediates mTORC1 activation (PubMed:25998567). Modulates integrin-related signaling and is essential for integrin-dependent cell spreading, migration and tumor progression (PubMed:11121428, PubMed:15625115).
Cellular Location	Apical cell membrane. Cell membrane; Single-pass type II membrane protein. Cell junction {ECO:0000250|UniProtKB:P10852}. Lysosome membrane. Melanosome. Basolateral cell membrane {ECO:0000250|UniProtKB:P10852}. Note=Localized at the plasma membrane when associated with SLC7A5/LAT1 or SLC7A8/LAT2 (PubMed:11311135, PubMed:9751058). Localized to the apical membrane of placental syncytiotrophoblastic cells (PubMed:11742812). Recruited to lysosomes by LAPTM4B (PubMed:25998567). Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065) Located selectively at cell-cell adhesion sites (By similarity) Colocalized with SLC7A8/LAT2 at the basolateral membrane of kidney proximal tubules and small intestine epithelia. Expressed in both luminal and abluminal membranes of brain capillary endothelial cells (By similarity). {ECO:0000250|UniProtKB:P10852,

ECO:0000269|PubMed:11311135, ECO:0000269|PubMed:11742812, ECO:0000269|PubMed:17081065, ECO:0000269|PubMed:25998567, ECO:0000269|PubMed:9751058}

Tissue Location

Expressed ubiquitously in all tissues tested with highest levels detected in kidney, placenta and testis and weakest level in thymus. During gestation, expression in the placenta was significantly stronger at full-term than at the mid-trimester stage Expressed in HUVECS and at low levels in resting peripheral blood T- lymphocytes and quiescent fibroblasts. Also expressed in fetal liver and in the astrocytic process of primary astrocytic gliomas. Expressed in retinal endothelial cells and in the intestinal epithelial cell line C2BBe1.

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