

SLC3A2 / CD98 Heavy Chain Antibody (clone 10.7)
Armenian Hamster Monoclonal Antibody
Catalog # ALS16308**Specification**

SLC3A2 / CD98 Heavy Chain Antibody (clone 10.7) - Product Information

Application	IHC
Primary Accession	P08195
Reactivity	Human, Mouse
Host	Armenian Hamster
Clonality	Monoclonal
Calculated MW	68kDa KDa

SLC3A2 / CD98 Heavy Chain Antibody (clone 10.7) - Additional Information**Gene ID** 6520**Other Names**

4F2 cell-surface antigen heavy chain, 4F2hc, 4F2 heavy chain antigen, Lymphocyte activation antigen 4F2 large subunit, Solute carrier family 3 member 2, CD98, SLC3A2, MDU1

Target/Specificity

Mouse SLC3A2 / CD98

Reconstitution & Storage

Store at -20°C.

Precautions

SLC3A2 / CD98 Heavy Chain Antibody (clone 10.7) is for research use only and not for use in diagnostic or therapeutic procedures.

SLC3A2 / CD98 Heavy Chain Antibody (clone 10.7) - Protein Information**Name** SLC3A2 ([HGNC:11026](#))**Synonyms** MDU1**Function**

Acts as a chaperone that facilitates biogenesis and trafficking of functional transporters heterodimers to the plasma membrane. Forms heterodimer with SLC7 family transporters (SLC7A5, SLC7A6, SLC7A7, SLC7A8, SLC7A10 and SLC7A11), a group of amino-acid antiporters (PubMed: [11557028](http://www.uniprot.org/citations/11557028), PubMed: [9829974](http://www.uniprot.org/citations/9829974), PubMed: [9751058](http://www.uniprot.org/citations/9751058), PubMed: [9878049](http://www.uniprot.org/citations/9878049), PubMed: [10574970](http://www.uniprot.org/citations/10574970), PubMed: [10903140](http://www.uniprot.org/citations/10903140), PubMed: [30867591](http://www.uniprot.org/citations/30867591)).

PubMed:33298890, PubMed:33758168, PubMed:34880232). Heterodimers function as amino acids 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:9829974, PubMed:10903140). 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 translocates neutral amino acids with broad specificity, thyroid hormones and L-DOPA (PubMed:11557028, PubMed:10574970, PubMed:11389679, PubMed:11564694, PubMed:11742812, PubMed:12117417, PubMed:12225859, PubMed:15980244, PubMed:12716892, PubMed:33298890, PubMed:33758168, PubMed:30867591). SLC3A2 is essential for plasma membrane localization, stability, and the transport activity of SLC7A5 and SLC7A8 (PubMed:10391915, PubMed:10574970, PubMed:11311135, PubMed:15769744, PubMed:33066406). When associated with LAPTM4B, the heterodimer SLC7A5 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:15625115, PubMed:11121428).

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:9751058, PubMed:11311135). 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 C2BBel.

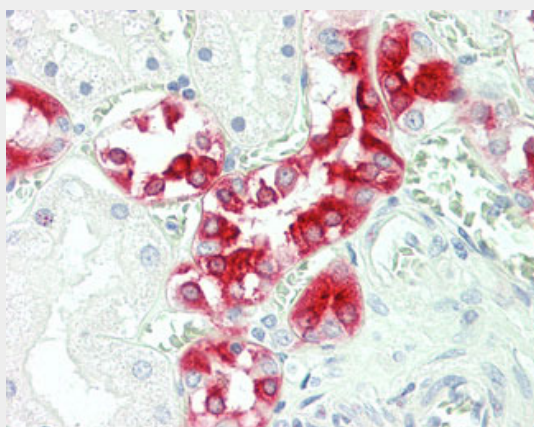
Volume

50 µl

SLC3A2 / CD98 Heavy Chain Antibody (clone 10.7) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SLC3A2 / CD98 Heavy Chain Antibody (clone 10.7) - Images

Human Kidney: Formalin-Fixed, Paraffin-Embedded (FFPE)

SLC3A2 / CD98 Heavy Chain Antibody (clone 10.7) - Background

Required for the function of light chain amino-acid transporters. Involved in sodium-independent, high-affinity transport of large neutral amino acids such as phenylalanine, tyrosine, leucine, arginine and tryptophan. Involved in guiding and targeting of LAT1 and LAT2 to the plasma membrane. When associated with SLC7A6 or SLC7A7 acts as an arginine/glutamine exchanger, following an antiport mechanism for amino acid transport, influencing arginine release in exchange for extracellular amino acids. Plays a role in nitric oxide synthesis in human umbilical vein endothelial cells (HUVECs) via transport of L-arginine. Required for normal and neoplastic cell growth. When associated with SLC7A5/LAT1, is also involved in the transport of L-DOPA across the blood-brain barrier, and that of thyroid hormones triiodothyronine (T3) and thyroxine (T4) across the cell membrane in tissues such as placenta. Involved in the uptake of methylmercury (MeHg) when administered as the L-cysteine or D,L-homocysteine complexes, and hence plays a role in metal ion homeostasis and toxicity. When associated with SLC7A5 or SLC7A8, involved in the cellular activity of small molecular weight nitrosothiols, via the stereoselective transport of L-nitrosocysteine (L-CNSO) across the transmembrane. Together with ICAM1, regulates the transport

activity LAT2 in polarized intestinal cells, by generating and delivering intracellular signals. When associated with SLC7A5, plays an important role in transporting L-leucine from the circulating blood to the retina across the inner blood-retinal barrier.

SLC3A2 / CD98 Heavy Chain Antibody (clone 10.7) - References

Quackenbush E.,et al.Proc. Natl. Acad. Sci. U.S.A. 84:6526-6530(1987).
Quackenbush E.,et al.Proc. Natl. Acad. Sci. U.S.A. 84:8618-8618(1987).
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Lumadue J.A.,et al.Proc. Natl. Acad. Sci. U.S.A. 84:9204-9208(1987).
Gottesdiener K.M.,et al.Mol. Cell. Biol. 8:3809-3819(1988).