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# CD98 (SLC3A2) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone IPO-T10 ]
Catalog # AH12315

## Product Information

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| **Application** | IF, FC |
| **Primary Accession** | P08195 |
| **Other Accession** | 6520, 502769 |
| **Reactivity** | Human |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | Mouse / IgM |
| **Clone Names** | IPO-T10 |
| **Calculated MW** | 67994 |

## Additional Information

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| **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 |
| **Application Note** | IF~~1:50~200 FC~~1:10~50 |
| **Storage** | Store at 2 to 8°C.Antibody is stable for 24 months. |
| **Precautions** | CD98 (SLC3A2) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **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:10574970, PubMed:10903140, PubMed:11557028, PubMed:30867591, PubMed:33298890, PubMed:33758168, PubMed:34880232, PubMed:9751058, PubMed:9829974, PubMed:9878049). 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:10903140, PubMed:9829974). Heterodimer |

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| | 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: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 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: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. |

## Background

CD98 exits as a heterodimer containing a disulphide-linked glycosylated heavy chain and a non-glycosylated light chain. It 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 disulfide 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.

## References

The Sixth International Workshop and Conference on Human Leukocyte Differentiation Antigens, Kobe, Japan 1996 (Garland Publishing, Inc, London)

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