

CD98 Rabbit pAb

CatalogNo: YT5599

Orthogonal Validated 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB, ELISA

MW

- 69kD (Observed)

Isotype

- IgG

Recommended Dilution Ratios

WB 1:500-1:2000**ELISA 1:10000****Not yet tested in other applications.**

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen The antiserum was produced against synthesized peptide derived from the C-terminal region of human SLC3A2. AA range: 491-540**Specificity** CD98 Polyclonal Antibody detects endogenous levels of CD98 protein.

Target Information

Gene name SLC3A2

Protein Name 4F2 cell-surface antigen heavy chain

Organism	Gene ID	UniProt ID
Human	6520 ;	P08195 ;
Mouse	17254 ;	P10852 ;
Rat	50567 ;	Q794F9 ;

Cellular Localization Apical cell membrane . Cell membrane ; Single-pass type II membrane protein . Cell junction . Lysosome membrane . Melanosome . 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 LPTM4B (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). .

Tissue specificity 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.

Function

Function: 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.

Induction: Expression is induced in resting peripheral blood T-lymphocytes following PHA stimulation. Expression increases at the time of maximal DNA synthesis, in fibroblasts stimulated to divide. Expression and the uptake of leucine is stimulated in mononuclear, cytotrophoblast-like choriocarcinoma cells by combined treatment with PMA and calcium ionophore.

Mass spectrometry: PubMed:11840567, miscellaneous: Arginine uptake is inhibited by increasing concentrations of leucine in the presence of Na(+).

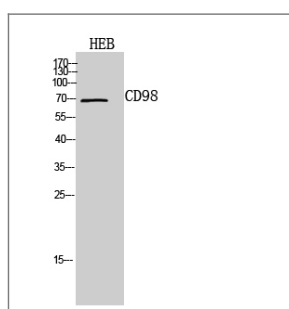
Similarity: Belongs to the SLC3A transporter family.

Subcellular location: Identified by mass spectrometry in melanosome fractions from stage I to stage IV. Localized to the plasma membrane when associated with SLC7A5 or SLC7A8. Localized to the placental apical membrane. 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.

Subunit: Disulfide-linked heterodimer of a glycosylated heavy chain and a non-glycosylated light chain (SLC7A5, SLC7A6, SLC7A7, SLC7A8, SLC7A10 or SLC7A11). Colocalizes with cadherins (By similarity). 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.

Tissue specificity: 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 Caco2-BBE.

Validation Data



Western Blot analysis of HEB cells using CD98 Polyclonal Antibody. Secondary antibody(catalog#:RS0002) was diluted at 1:20000

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