



CD98 (PT1867R) Rabbit mAb

Catalog No	YP-rAb-18536
Isotype	IgG
Reactivity	Human
Applications	WB、IHC、IF、IP、ELISA
Gene Name	SLC3A2
Protein Name	4F2 cell-surface antigen heavy chain
Immunogen	The specific immunogen used to produce this antibody is proprietary information.
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Purification	Recombinant Antibody expressed in animal component-free (ACF) media, purified via Protein A affinity chromatography.
Dilution	IHC 1:200-1:1000; WB 1:500-1:2000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200 Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0 (Cat#YS0004)
Concentration	0.5 mg/ml
Purity	≥90%
Storage Stability	-15°C to -25°C/1 year(Do not lower than -25°C)
Synonyms	4F2 cell-surface antigen heavy chain;SLC3A2 ;MDU1 ;4F2 cell-surface antigen heavy chain ;4F2hc ;4F2 heavy chain antigen ;Lymphocyte activation antigen 4F2 large subunit ;CD98;SLC3A2
Observed Band	68kD
Calculated Molecular Weight	68kD
Cell Pathway	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 LAPTMB4 (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.

Background

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]

matters needing attention

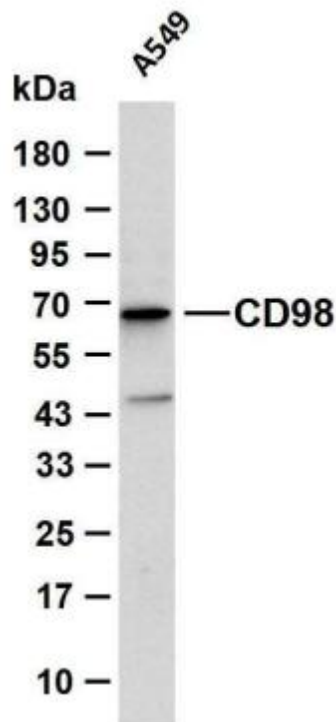
Avoid repeated freezing and thawing!

Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



Products Images

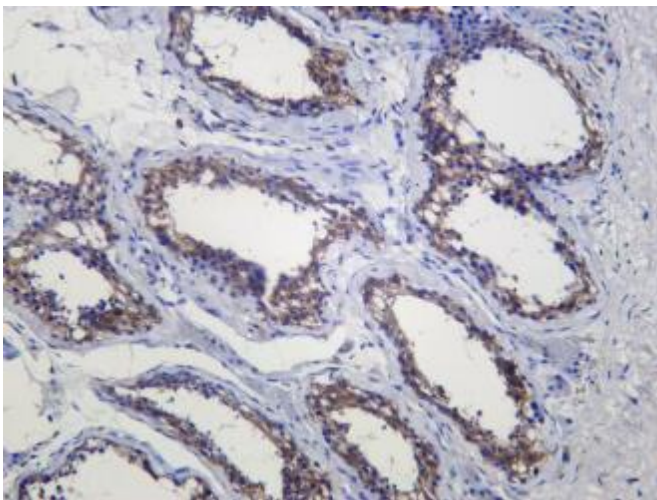


Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-CD98 (PT1867R) antibody. The HRP-conjugated Goat anti-Rabbit IgG (H + L) antibody was used to detect the antibody.

Lane 1: A549

Predicted band size: 68kDa

Observed band size: 68kDa



Human testis was stained with anti-CD98 (PT1867R) Rabbit antibody