Product datasheet

Anti-CD98 antibody ab244356

Overview

Product name: Anti-CD98 antibody
Description: Rabbit polyclonal to CD98
Host species: Rabbit
Tested applications: Suitable for: WB, ICC/IF, IHC-P
Species reactivity: Reacts with: Human
Immunogen: Recombinant fragment corresponding to Human CD98 aa 245-385. Sequence:

KGRLDYLSSLKVKGLVGPIHKNQKDDVAQTDLLQIDP
NFGSKEDFDSSL
QSAKKKSIRVLDLTNPNYRGNSWFSTQVDTVATKVKD
ALEFWLOAGVDG
FQVRDIENLKDASSFLAEWQNTKGFSEDRLLIAGTNS
SDL

Database link: P08195


Properties

Form: Liquid
Storage buffer: pH: 7.20
Preservative: 0.02% Sodium azide
 Constituents: PBS, 40% Glycerol
Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG
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.

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 C2BBe1.

Sequence similarities

Belongs to the SLC3A transporter family.

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.

Cellular localization

Apical cell membrane. Melanosome. 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 (By similarity).
There are 4 isoforms produced by alternative splicing.

Immunocytochemistry/ Immunofluorescence - Anti-CD98 antibody (ab244356)

PFA-fixed, Triton X-100 permeabilized U-2 OS (human bone osteosarcoma epithelial cell line) cells stained for CD98 (green) using ab244356 at 4 µg/ml in ICC/IF.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD98 antibody (ab244356)

Paraffin-embedded human parathyroid gland tissue stained for CD98 using ab244356 at 1/2500 dilution in immunohistochemical analysis.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD98 antibody (ab244356)

Paraffin-embedded human skeletal muscle tissue stained for CD98 using ab244356 at 1/2500 dilution in immunohistochemical analysis. Low expression as expected.

Western blot - Anti-CD98 antibody (ab244356)

**All lanes**: Anti-CD98 antibody (ab244356) at 0.4 μg/ml

**Lane 1**: RT4 (human urinary bladder cancer cell line) cell lysate

**Lane 2**: U-251 MG (human brain glioma cell line) cell lysate
Western blot - Anti-CD98 antibody (ab244356)

All lanes: Anti-CD98 antibody (ab244356) at 0.4 µg/ml

Lane 1: SK-MEL-30 cell lysate
Lane 2: HEK-293 (human epithelial cell line from embryonic kidney) cell lysate

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