Anti-CD98 Antibody

IRS130MS

Product Type:	Mouse monoclonal IgG2b, primary antibodies
Species reactivity:	Human
Applications:	mIHC
Molecular Wt:	Predicted band size: 68 kDa

Description: Component of several heterodimeric complexes involved in amino acid transport. The precise substrate specificity depends on the other subunit in the heterodimer. The complexes function as amino acid exchangers. The homodimer functions as sodium-independent, high-affinity transporter that mediates uptake of large neutral amino acids such as phenylalanine, tyrosine, L-DOPA, leucine, histidine, methionine and tryptophan. The heterodimer formed by SLC3A2 and SLC7A6 or SLC3A2 and SLC7A7 mediates the uptake of dibasic amino acids. The heterodimer with SLC7A5/LAT1 mediates the transport of thyroid hormones triiodothyronine (T3) and thyroxine (T4) across the cell membrane. The heterodimer with SLC7A5/LAT1 is involved in the uptake of toxic methylmercury (MeHg) when administered as the L-cysteine or D,L-homocysteine complexes. The heterodimer with SLC7A5/LAT1 is involved in the uptake of leucine. When associated with LAPTM4B, the heterodimer with SLC7A5/LAT1 is recruited to lysosomes to promote leucine uptake into these organelles, and thereby mediates mTORC1 activation. The heterodimer with SLC7A5/LAT1 may play a role in the transport of L-DOPA across the blood-brain barrier. The heterodimer formed by SLC3A2 and SLC7A5/LAT1 or SLC3A2 and SLC7A8/LAT2 is 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 of SLC7A8/LAT2 in polarized intestinal cells by generating and delivering intracellular signals. Required for targeting of SLC7A5/LAT1 and SLC7A8/LAT2 to the plasma membrane and for channel activity. Plays a role in nitric oxide synthesis in human umbilical vein endothelial cells (HUVECs) via transport of L-arginine. May mediate blood-to-retina L-leucine transport across the inner blood-retinal barrier.

Immunogen:	Recombinant protein within human CD98 aa 450-630 (Extracellular).
Positive control:	Human kidney tissue.
Subcellular location:	Apical cell membrane, Cell membrane, Cell junction, Lysosome membrane.
Database links:	SwissProt: P08195 Human
Recommended Dilutions:	
mIHC	1:100
Storage Buffer:	1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.
Storage Instruction:	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
Purity:	Protein A affinity purified.

Images

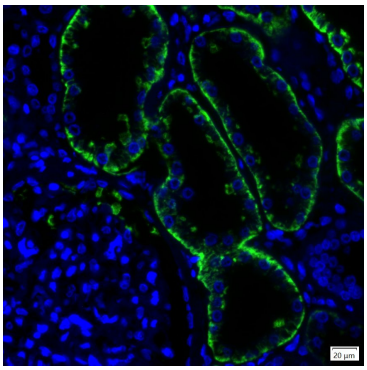

Fig1: mIHC analysis of human kidney tissue (Formalin/PFA-fixed paraffin-embedded sections) with Mouse anti-CD98 antibody (IRS130MS) at 1/100 dilution. The immunostaining was performed with the IRISKitCmTSA Kit (900809). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95℃. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

Background References

1. Mastroberardino L., Spindler B., Pfeiffer R., Skelly P.J., Loffing J., Shoemaker C.B., Verrey F. Amino-acid transport by heterodimers of 4F2hc/CD98 and members of a permease family. Nature 395:288-291 (1998)
2. Arancibia-Garavilla Y., Toledo F., Casanello P., Sobrevia L. Nitric oxide synthesis requires activity of the cationic and neutral amino acid transport system y+L in human umbilical vein endothelium. Exp. Physiol. 88:699-710 (2003)