Anti-CD98 Antibody [A9D7]

HA601125

Product Type:	Mouse monoclonal IgG2b, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 68 kDa
Clone number:	A9D7

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:	A431 cell lysate, Hela cell lysate, HepG2 cell lysate, human skin tissue, human kidney tissue.
Subcellular location:	Apical cell membrane, Cell membrane, Cell junction, Lysosome membrane.
Database links:	SwissProt: P08195 Human
Recommended Dilutions:	
WB	1:1,000
IHC-P	1:1,000
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

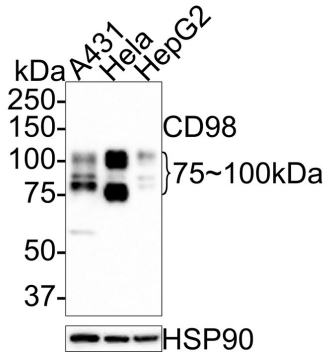

Fig1: Western blot analysis of CD98 on different lysates with Mouse anti-CD98 antibody (HA601125) at 1/1,000 dilution.

Lane 1: A431 cell lysate
Lane 2: Hela cell lysate
Lane 3: HepG2 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 68 kDa
Observed band size: 75~100 kDa

Exposure time: 1 minute 22 seconds;

8% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601125) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:150,000 dilution was used for 1 hour at room temperature.

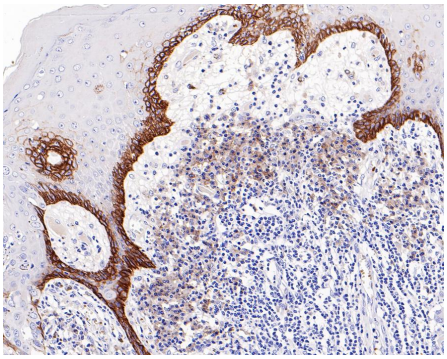

Fig2: Immunohistochemical analysis of paraffin-embedded human skin tissue with Mouse anti-CD98 antibody (HA601125) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601125) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

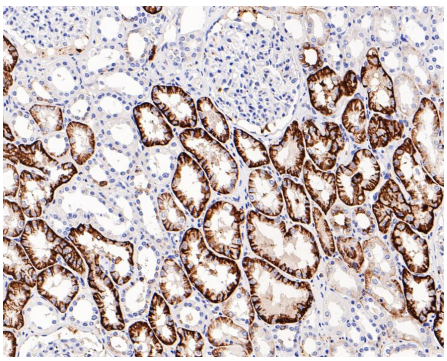

Fig3: Immunohistochemical analysis of paraffin-embedded human kidney tissue with Mouse anti-CD98 antibody (HA601125) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601125) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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)