Data Sheet (Cat.No.TMPY-06611)

TargetMol

CD98 Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	4F2;4F2HC;MDU1;4T2HC;solute carrier family 3 (amino acid transporter heavy chain), member 2;NACAE;CD98HC;CD98
Protein Construction:	Arg206-Ala630
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAH01061
Molecular Weight:	49.75 kDa (predicted); 50-65 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Immobilized Biotinylated Human CD98, His Tag at 1 μg/ml (100 μl/well) on the streptavidin precoated plate (5 μg/ml). Dose response curve for HAnti-CD98 Antibody, hFc Tag with the EC50 of 2.3 ng/ml determined by ELISA. (QC Test)
Purity:	> 95% as determined by Bis-Tris PAGE; > 90% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

4F2 cell-surface antigen heavy chain, also known as 4F2 heavy chain antigen, Lymphocyte activation antigen 4F2 large subunit, CD98, SLC3A2 and MDU1, is a single-pass type I I membrane protein that belongs to the SLC3A transporter family. SLC3A2 / MDU1 is 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 is

significantly stronger at full-term than at the mid-trimester stage. SLC3A2 / MDU1 is expressed in HUVECS and at low levels in resting peripheral blood T-lymphocytes and quiescent fibroblasts. It is expressed in fetal liver and in the astrocytic process of primary astrocytic gliomas. SLC3A2 / MDU1 is also expressed in retinal endothelial cells and in the intestinal epithelial cell line Caco2-BBE. SLC3A2 / MDU1 is required for the function of light chain amino-acid transporters. It is involved in sodium-independent, high-affinity transport of large neutral amino acids such as phenylalanine, tyrosine, leucine, arginine and tryptophan. SLC3A2 / MDU1 is involved in guiding and targeting of LAT1 and LAT2 to the plasma membrane. When associated with SLC7A6 or SLC7A7, SLC3A2 / MDU1 acts as an arginine/glutamine exchanger, following an antiport mechanism for amino acid transport, influencing arginine release in exchange for extracellular amino acids. SLC3A2 / MDU1 plays a role in nitric oxide synthesis in human umbilical vein endothelial cells (HUVECs) via transport of L-arginine. It is required for normal and neoplastic cell growth. When associated with SLC7A5/LAT1, SLC3A2 / MDU1 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.

Reference

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