



# Recombinant Protein Technical Manual

## Recombinant Rat CD98 Protein (His Tag)

RPES4200

### Product Data:

**Product SKU:** RPES4200

**Size:** 20µg

**Species:** Rat

**Expression host:** HEK293 Cells

**Uniprot:** Q794F9

### Protein Information:

**Molecular Mass:** 49.7 kDa

**AP Molecular Mass:** 58 kDa

**Tag:** N-His

**Bio-activity:**

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** SLC3A2

## Immunogen Information:

**Sequence:** Ala100-Ala527

## 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 which 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 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.