CD98 Protein, Rat (HEK293, Fc)

Cat. No.:	HY-P75663
Synonyms:	4F2 cell-surface antigen heavy chain; 4F2hc; CD98; SLC3A2
Species:	Rat
Source:	HEK293
Accession:	Q794F9 (A100-A527)
Gene ID:	50567
Molecular Weight:	Approximately 95 kDa

PROPERTIES

AA Sequence	APRCRELPVQ RWWHKGALYR IGDLQAFVGP EARGIAGLKN HLEYLSTLKV KGLVLGPIHK NQKDEVNETD LKQIDPDLGS QEDFKDLLQS AKKKSIHIIL DLTPNYKGQN AWFLPPQADI VATKMKEALS SWLQDGVDGF QVRDVGKLAN ASLYLAEWQN ITKNFSEDRL LIAGTASSDL QQIVNILEST SDLLLTSSYL SQPVFTGEHA ELLVIKYLNA TGSRWCSWSV SQAGLLTSFI PAQFLRLYQL LLFTLPGTPV FSYGDELGLQ AVALPGQPME APFMLWNESS NSQTSSPVSL NMTVKGQNED PGSLLTQFRR LSDLRGKERS LLHGDFDALS SSSGLFSYVR HWDQNERYLV VLNFQDVGLS ARVGASNLPA GISLPASANL LLSTDSTRLS REEGTSLSLE NLSLNPYEGL LLQFPFVA
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in PBS, pH 7.4. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	CD98 protein functions as a chaperone, facilitating the biogenesis and trafficking of functional transporter heterodimers to

the plasma membrane. It forms heterodimers with various SLC7 family transporters, including SLC7A5, SLC7A6, SLC7A7, SLC7A8, SLC7A10, and SLC7A11, acting as amino acid antiporters with substrate specificity determined by the SLC7A subunit. For example, heterodimers formed by SLC3A2/SLC7A6 or SLC3A2/SLC7A7 mediate the uptake of dibasic amino acids, while the SLC3A2/SLC7A11 heterodimer functions as an antiporter by exchanging extracellular anionic L-cystine and intracellular L-glutamate across the cellular plasma membrane. CD98 is essential for the plasma membrane localization, stability, and transport activity of SLC7A5 and SLC7A8. When associated with LAPTM4B, the SLC7A5 heterodimer is recruited to lysosomes, promoting leucine uptake and mTORC1 activation. CD98 also modulates integrin-related signaling and is crucial for integrin-dependent cell spreading, migration, and tumor progression. It forms a disulfide-linked heterodimer with a non-glycosylated light chain (SLC7A5, SLC7A6, SLC7A7, SLC7A8, SLC7A10, or SLC7A11) and interacts with TLCD3A/CT120 and ICAM1. Additionally, CD98 constitutively and specifically associates with beta-1 integrins, including alpha-2/beta-1, alpha-3/beta-1, alpha-5/beta-1, and alpha-6/beta-1, with minimal interaction with alpha-4/beta-1. It also interacts with LAPTM4B, recruiting SLC3A2 and SLC7A5 to lysosomes for leucine uptake and mTORC1 activation.

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