

CD98 Protein, Rat (HEK293, His)

Cat. No.:	HY-P75664
Synonyms:	4F2 cell-surface antigen heavy chain; 4F2hc; CD98; SLC3A2
Species:	Rat
Source:	HEK293
Accession:	Q794F9 (A100-A527)
Gene ID:	50567
Molecular Weight:	Approximately 58 kDa

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	<p>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.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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