CD8 beta Protein, Human (HEK293)

Cat. No.:	HY-P74266
Synonyms:	T-Cell Surface Glycoprotein CD8 Beta Chain; CD8b; CD8B; CD8B1
Species:	Human
Source:	HEK293
Accession:	P10966 (M1-P170)
Gene ID:	926
Molecular Weight:	Approximately 27.3 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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 ddH_2O.
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	CD8 beta, an integral membrane glycoprotein, plays a pivotal role in the immune response, serving multiple functions against both external and internal threats. In T-cells, its primary function is as a coreceptor for the MHC class I molecule:peptide complex, where antigens presented by class I peptides originate from cytosolic proteins. CD8 beta interacts simultaneously with the T-cell receptor (TCR) and the MHC class I proteins presented by antigen-presenting cells (APCs), recruiting the Src kinase LCK to the vicinity of the TCR-CD3 complex. The presence of a palmitoylation site in the cytoplasmic tail of the CD8B chain facilitates the partitioning of CD8 into plasma membrane lipid rafts, enriching signaling proteins. Once LCK is recruited, it initiates diverse intracellular signaling pathways, phosphorylating various substrates and leading to lymphokine production, motility, adhesion, and activation of cytotoxic T-lymphocytes (CTLs). CD8 beta also plays a critical role in the thymic selection of CD8+ T-cells. At the cell surface, it forms disulfide-linked heterodimers with CD8A and interacts with CD3D, coupling TCR-CD3 with CD8, and also interacts with LCK.

Caution: Product has not been fully validated for medical applications. For research use only.

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