

## CD8 beta Protein, Human (HEK293, His)

Cat. No.:	HY-P72702
Synonyms:	T-Cell Surface Glycoprotein CD8 Beta Chain; CD8b; CD8B; CD8B1
Species:	Human
Source:	HEK293
Accession:	P10966 (L22-P170)
Gene ID:	926
Molecular Weight:	25-32 kDa

### PROPERTIES

AA Sequence	<p>L Q Q T P A Y I K V      Q T N K M V M L S C      E A K I S L S N M R      I Y W L R Q R Q A P</p> <p>S S D S H H E F L A      L W D S A K G T I H      G E E V E Q E K I A      V F R D A S R F I L</p> <p>N L T S V K P E D S      G I Y F C M I V G S      P E L T F G K G T Q      L S V V D F L P T T</p> <p>A Q P T K K S T L K      K R V C R L P R P E      T Q K G P L C S P</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. 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	<p>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</p>
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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.

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

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