Recombinant CD8B protein (His tag)

Catalog Number	546752
Synonyms	CD antigen CD8b
Species	Human
Expression System	E. coli
Accession	P10966
Molecular Weight	Predictes a molecular mass of 18.44 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	22-170
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 22-170 aa (P10966) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human T-cell surface glycoprotein CD8 beta chain (CD8B) fragment (aa 22-170) is a high-purity protein designed for immunological research. This fragment fully encompasses the Ig-like V-type domain, making it an ideal tool for studying CD8 coreceptor functions, T-cell signaling mechanisms, and MHC class I interactions in controlled experimental systems. The full-length CD8 beta chain is an integral membrane glycoprotein that serves as a crucial coreceptor for MHC class I molecule:peptide complexes on T-cells. It plays an essential role in immune responses by simultaneously interacting with the T-cell receptor and MHC class I proteins presented by antigen-presenting cells. CD8B recruits the Src kinase LCK to the TCR-CD3 complex vicinity, initiating intracellular signaling pathways that lead to cytotoxic T-lymphocyte activation, lymphokine production, and cellular adhesion. The protein requires partner CD8A for efficient cell surface expression, and the heterodimer localizes to lipid rafts via CD8B cytoplasmic tail palmitoylation, enriching signaling proteins. CD8B also plays a critical role in thymic selection of CD8+ T-cells, making it fundamental to adaptive immunity development and function.