Human CD8 alpha&beta (CD8A&CD8B) Heterodimer Protein, His Tag&Tag Free (MALS verified)

Catalog # CDA-H52W5

Synonym

CD8 alpha & beta,CD8A & CD8B

Source

Human CD8A&CD8B Heterodimer Protein, His Tag&Tag Free(CDA-H52W5) is expressed from human 293 cells (HEK293). It contains AA Ser 22 - Asp 182 (CD8A) & Leu 22 - Pro 170 (CD8B) (Accession # P01732-1 (CD8A) & P10966-1 (CD8B)).
Predicted N-terminus: Ser 22 (CD8A) & Leu 22 (CD8B)

Molecular Characterization

Human CD8A&CD8B Heterodimer Protein, His Tag&Tag Free, produced by co-expression of CD8 alpha and CD8 beta, has a calculated MW of 19.5 kDa (CD8 alpha) and 22.1 kDa (CD8 beta). Subunit CD8 alpha is fused with an acidic tail at the C-terminus and followed by a polyhistidine tag and subunit CD8 beta contains no tag but a basic tail at the C-terminus. As a result of glycosylation, the heterodimer protein migrates as 30-32 kDa and 32-34 kDa under reducing (R) condition, and 30-33 kDa and 58-70 kDa under non-reducing (NR) condition (SDS-PAGE).

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

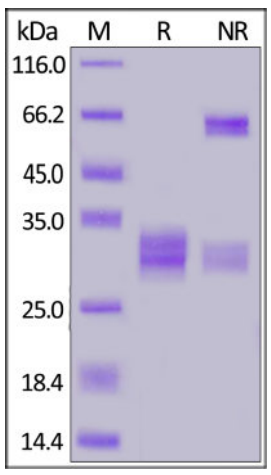
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

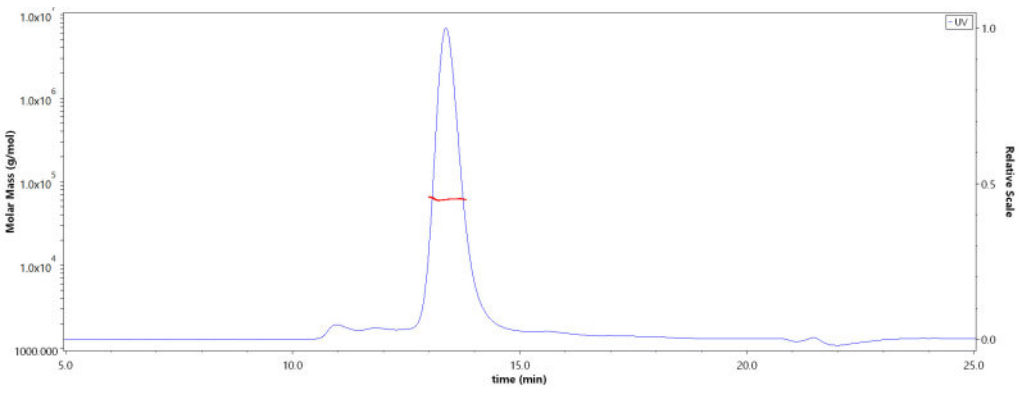
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



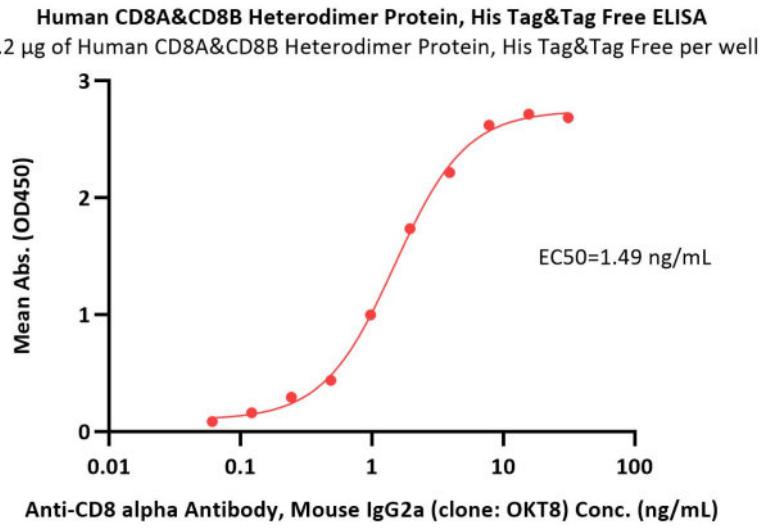
Human CD8A&CD8B Heterodimer Protein, His Tag&Tag Free on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

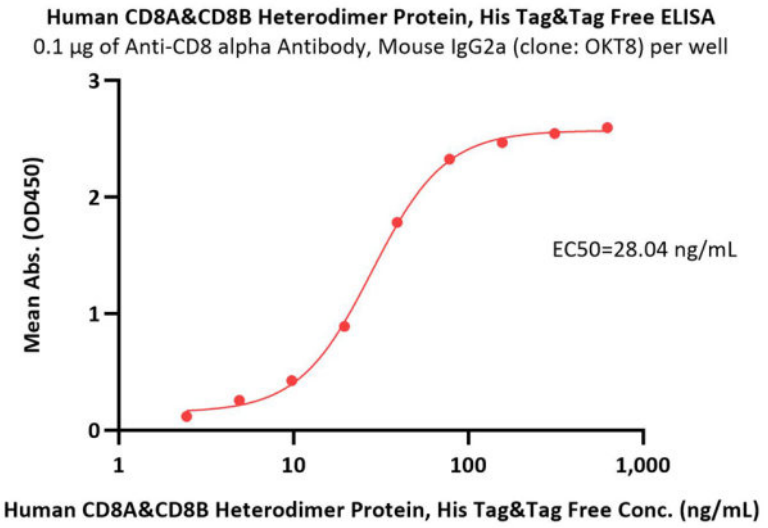
SEC-MALS



The purity of Human CD8A&CD8B Heterodimer Protein, His Tag&Tag Free (Cat. No. CDA-H52W5) is more than 85% and the molecular weight of this protein is around 53-68 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA





Immobilized Human CD8A&CD8B Heterodimer Protein, His Tag&Tag Free (Cat. No. CDA-H52W5) at 2 μg/mL (100 μL/well) can bind Anti-CD8 alpha Antibody, Mouse IgG2a (clone: OKT8) with a linear range of 0.06-4 ng/mL (QC tested).

Immobilized Anti-CD8 alpha Antibody, Mouse IgG2a (clone: OKT8) at 1 μg/mL (100 μL/well) can bind Human CD8A&CD8B Heterodimer Protein, His Tag&Tag Free (Cat. No. CDA-H52W5) with a linear range of 2-39 ng/mL (Routinely tested).

Background

Integral membrane glycoprotein that plays an essential role in the immune response and serves multiple functions in responses against both external and internal offenses. CD8A forms disulfide-linked heterodimers with CD8B at the cell surface. CD8A homodimer molecules also promote the survival and differentiation of activated lymphocytes into memory CD8 T-cells. Additionally, CD8B plays a critical role in thymic selection of CD8+ T-cells. A palmitoylation site in the cytoplasmic tail of CD8B chain contributes to partitioning of CD8 into the plasma membrane lipid rafts where signaling proteins are enriched.

Clinical and Translational Updates