



Synonym

CD3E & CD3D,CD3 delta & CD3 epsilon

Source

Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free(CDD-H82W6) is expressed from human 293 cells (HEK293). It contains AA Asp 23 - Asp 126 (CD3E) & Phe 22 - Ala 105 (CD3D) (Accession # [P07766-1](#) (CD3E) & [P04234-1](#) (CD3D)).

Predicted N-terminus: Asp 23 (CD3E) & Phe 22 (CD3D)

Molecular Characterization

CD3E (Asp 23 - Asp 126) P07766-1	Poly-his	Avi
CD3D (Phe 22 - Ala 105) P04234-1		

Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free is produced by co-expression of CD3E and CD3D, has a calculated MW of 18.6 kDa (CD3E) and 13.4 kDa (CD3D). Subunit CD3E is fused with a polyhistidine tag and an Avi tag (Avitag™) at the C-terminus and subunit CD3D contains no tag. As a result of glycosylation, the heterodimer protein migrates as 20-28 kDa under reducing (R) condition, and 38-47 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE).

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% 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

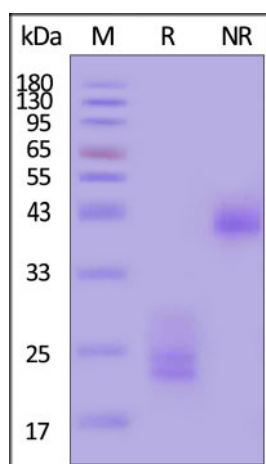
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

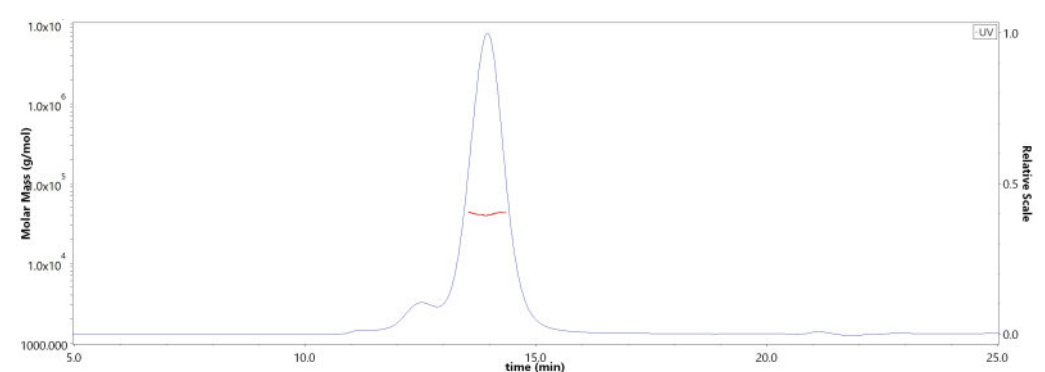
This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



SEC-MALS



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and more!





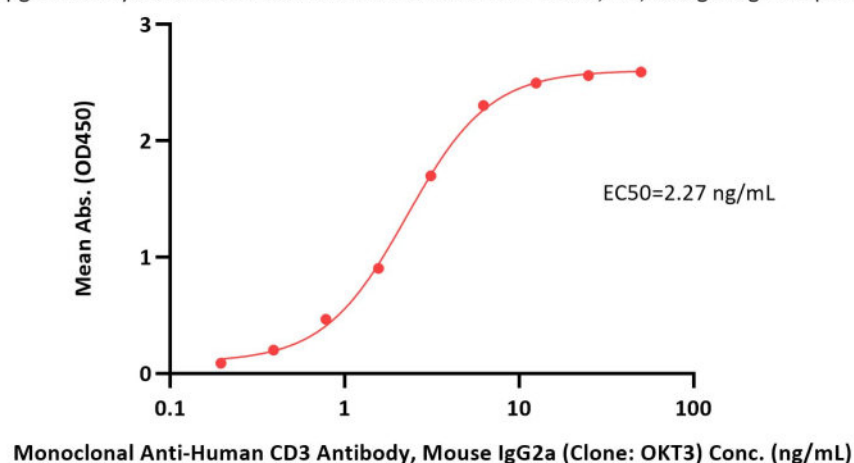
Catalog # CDD-H82W6

Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&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 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

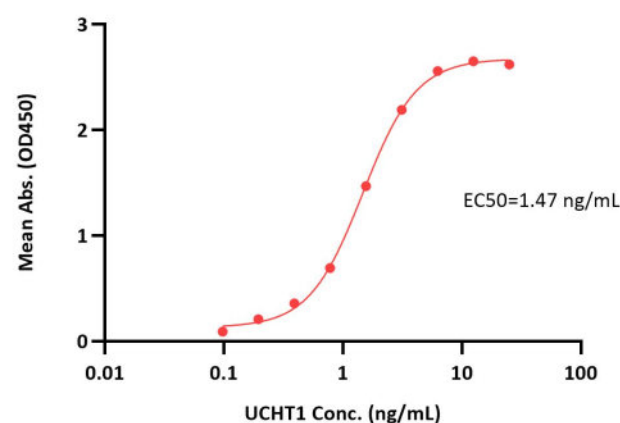
The purity of Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free (Cat. No. CDD-H82W6) is more than 85% and the molecular weight of this protein is around 35-55 kDa verified by SEC-MALS. [Report](#)

Bioactivity-ELISA

Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free ELISA
0.1 µg of Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free per well



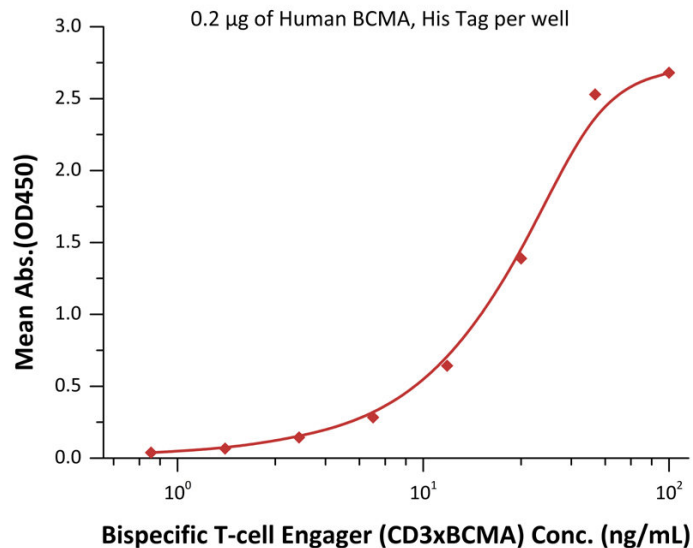
Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free ELISA
0.1 µg of Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free per well



Immobilized Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free (Cat. No. CDD-H82W6) at 1 µg/mL (100 µL/well) on Streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate, can bind Monoclonal Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3) (Cat. No. CDE-M120a) with a linear range of 0.2-6 ng/mL (QC tested).

Immobilized Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free (Cat. No. CDD-H82W6) at 1 µg/mL (100 µL/well) on Streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate, can bind UCHT1 with a linear range of 0.1-3 ng/mL (Routinely tested).

Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free ELISA
0.2 µg of Human BCMA, His Tag per well



Quantitative Analysis of Bispecific T-cell Engager (CD3 X BCMA) in human serum.

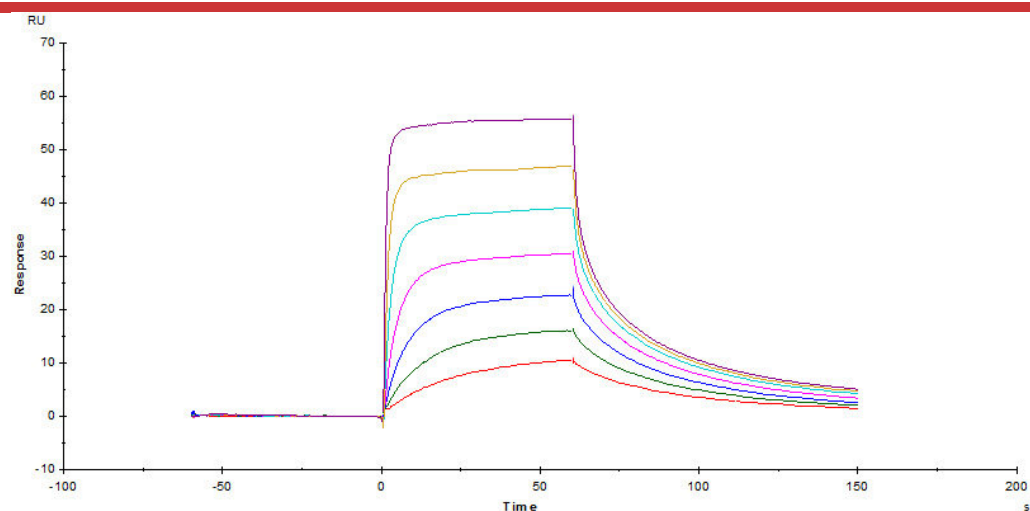
Immobilized Human BCMA, His Tag (Cat. No. BCA-H522y) at 2 µg/mL, add increasing concentrations of Bispecific T cell Engager (CD3 X BCMA) in 10% human serum and then add Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free (Cat. No. CDD-H82W6) at 0.2 µg/mL.

Detection was performed using HRP-conjugated streptavidin with sensitivity of 15 ng/mL (Routinely tested).

Bioactivity-SPR

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Biotinylated Human CD3E&CD3D Heterodimer Protein, His,Avitag&Tag Free (Cat. No. CDD-H82W6) captured on Biotin CAP - Series S sensor Chip can bind Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3) with an affinity constant of 22.5 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

Background

T-cell surface glycoprotein CD3 delta & CD3 epsilon chain, also known as CD3D & CD3E or CD3D&CD3E respectively, are single-pass type I membrane proteins. CD3D, together with CD3- epsilon(CD3E) , CD3-gamma and CD3-zeta, and the T-cell receptor alpha/beta and gamma/delta heterodimers, forms the T cell receptor-CD3 complex. T cell receptor-CD3 complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways.

Clinical and Translational Updates

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