

### Synonym

CD3 epsilon & CD3 gamma, CD3E & CD3G

### Source

Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag (CDG-H5253) is expressed from human 293 cells (HEK293). It contains AA Asp 23 - Asp 126 (CD3E) & Gln 23 - Ser 116 (CD3G) (Accession # [NP\\_000724.1](#) (CD3E) & [AAI13831](#) (CD3G)).

Predicted N-terminus: Asp 23 (CD3E) & Gln 23 (CD3G)

### Molecular Characterization

CD3E (Asp 23 - Asp 126) NP_000724.1	Fc(Pro 100 - Lys 330) P01857
CD3G (Gln 23 - Ser 116) AAI13831	Fc(Pro 100 - Lys 330) P01857

Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag is produced by co-expression of CD3E and CD3G, has a calculated MW of 38.3 kDa (CD3E) and 36.9 kDa (CD3G). Subunit CD3E is fused with a human IgG1 Fc tag at the C-terminus and subunit CD3G is fused with a human IgG1 Fc tag at the C-terminus. As a result of glycosylation, the protein migrates as 43-55 kDa under reducing (R) condition, and 90-110 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) 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.

>90% as determined by SEC-MALS.

### 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

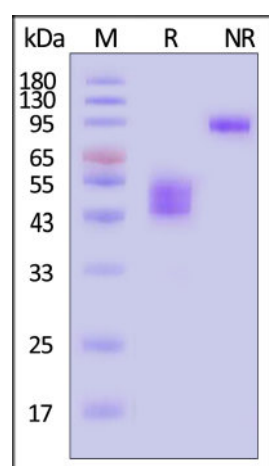
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

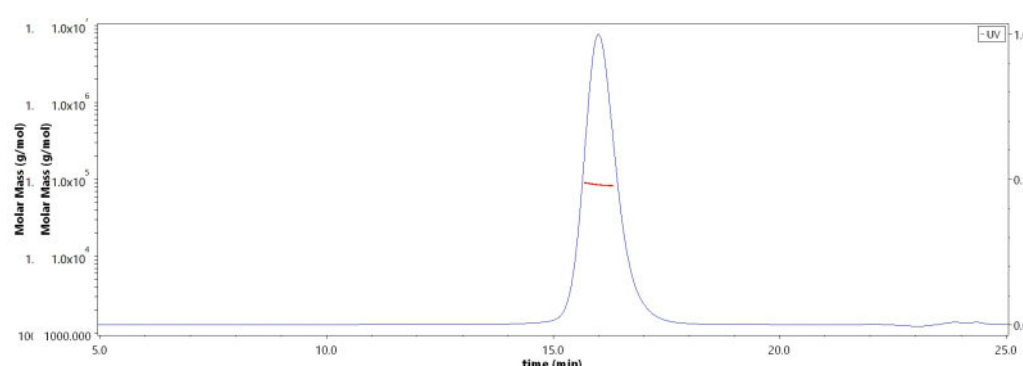
### SDS-PAGE



Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag 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% (With [Star Ribbon Pre-stained Protein Marker](#)).

### Bioactivity-ELISA

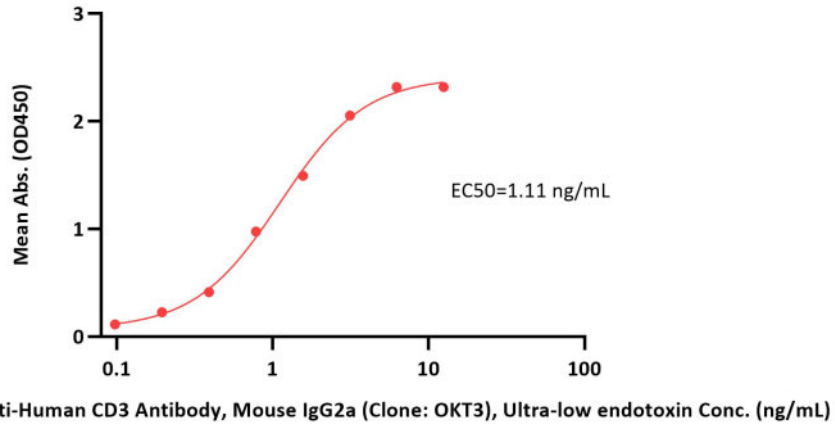
### SEC-MALS



The purity of Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag (Cat. No. CDG-H5253) is more than 90% and the molecular weight of this protein is around 80-90 kDa verified by SEC-MALS.

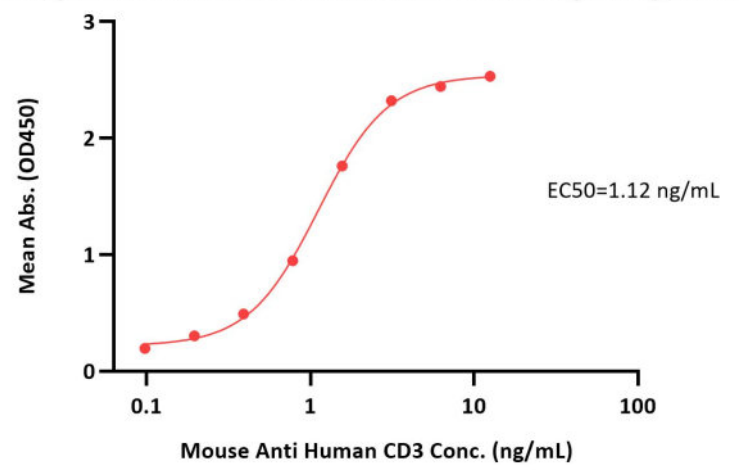
[Report](#)

Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag ELISA  
0.1 µg of Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag per well



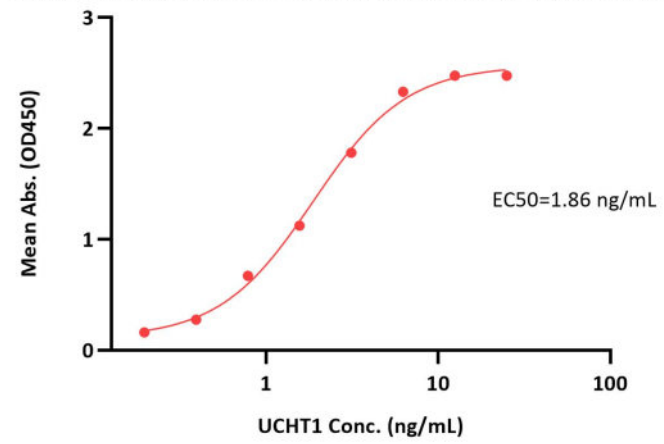
Immobilized Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag (Cat. No. CDG-H5253) at 1 µg/mL (100 µL/well) can bind Monoclonal Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3), premium grade (Cat. No. CDE-M120a) with a linear range of 0.8-3 ng/mL (QC tested).

Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag ELISA  
0.1 µg of Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag per well



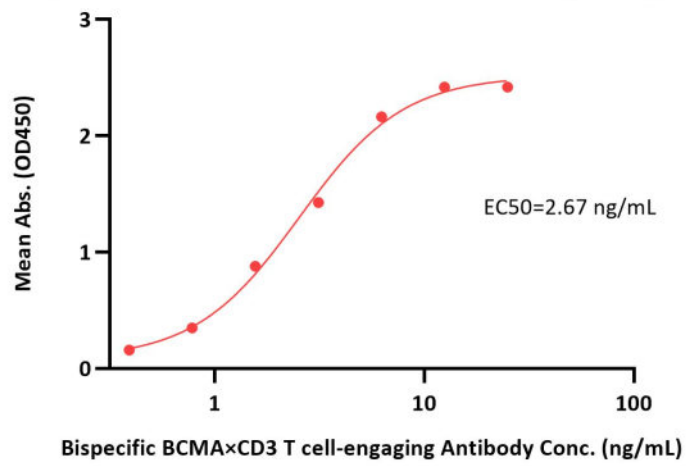
Immobilized Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag (Cat. No. CDG-H5253) at 1 µg/mL (100 µL/well) can bind Mouse Anti Human CD3 with a linear range of 0.8-2 ng/mL (Routinely tested).

Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag ELISA  
0.1 µg of Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag per well



Immobilized Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag (Cat. No. CDG-H5253) at 1 µg/mL (100 µL/well) can bind UCHT1 with a linear range of 0.8-3 ng/mL (Routinely tested).

Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag ELISA  
0.1 µg of Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag per well



Immobilized Human CD3E&CD3G Heterodimer Protein, Fc Tag&Fc Tag (Cat. No. CDG-H5253) at 1 µg/mL (100 µL/well) can bind Bispecific BCMA×CD3 T cell-engaging Antibody with a linear range of 0.8-3 ng/mL (Routinely tested).

## Background

T-cell surface glycoprotein CD3 delta & CD3 gamma chain, also known as CD3D & CD3G or CD3D&CD3G 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

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.