# Biotinylated Mouse CD3 epsilon&CD3 gamma Heterodimer Protein, His,Avitag™&Flag Tag (MALS verified)

Catalog # CDG-M58D2





## **Synonym**

CD3 epsilon & CD3 gamma, CD3E & CD3G

#### Source

Biotinylated Mouse CD3E&CD3G Heterodimer Protein, His,Avitag&Flag Tag(CDG-M58D2) is expressed from human 293 cells (HEK293). It contains AA Asp 23 - Asp 108 (CD3E) & Gln 23 - Ser 116 (CD3G) (Accession # P22646-1 (CD3E) & P11942-1 (CD3G)).

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

## **Molecular Characterization**

CD3E(Asp 23 - Asp 108) P22646-1	Poly-his	Avi
CD3G(Gln 23 - Ser 116) P11942-1	Flag	

Biotinylated Mouse CD3E&CD3G Heterodimer Protein, His,Avitag&Flag Tag is produced by co-expression of CD3E and CD3G, has a calculated MW of 16.8 kDa (CD3E) and 15.2 kDa (CD3G). Subunit CD3E carries a polyhistidine tag at the C-terminus, followed by an Avi tag and subunit CD3G is fused with a flag tag at the C-terminus. As a result of glycosylation, the protein migrates as 20-23 kDa under reducing (R) condition, and 35-40 kDa under non-reducing (NR) condition (SDS-PAGE).

# Labeling

Biotinylation of this product is performed using Avitag<sup>TM</sup> 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  $\mu g$  by the LAL method.

# **Purity**

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

#### **Formulation**

Lyophilized from  $0.22~\mu m$  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**

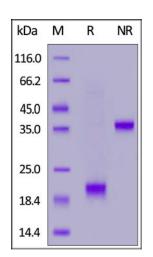
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

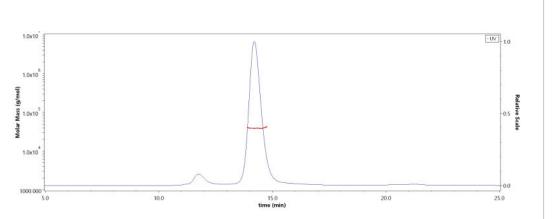
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

# **SDS-PAGE**



Biotinylated Mouse CD3E&CD3G Heterodimer Protein, His,Avitag&Flag Tag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel

# SEC-MALS



The purity of Biotinylated Mouse CD3E&CD3G Heterodimer Protein, His, Avitag&Flag Tag (Cat. No. CDG-M58D2) is more than 90% and the



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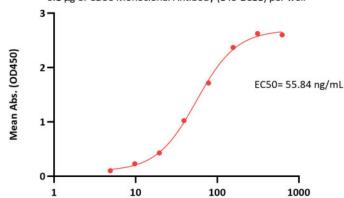


was stained with Coomassie Blue. The purity of the protein is greater than 95%.

molecular weight of this protein is around 35-45 kDa verified by SEC-MALS. Report

## **Bioactivity-ELISA**

Biotinylated Mouse CD3 epsilon&CD3 gamma Heterodimer Protein, His,Avitag&Flag Tag ELISA 0.1  $\mu$ g of CD3e Monoclonal Antibody (145-2C11) per well



Biotinylated Mouse CD3 epsilon&CD3 gamma Heterodimer Protein, His,Avitag&Flag Tag Conc. (ng/mL)

Immobilized CD3E Monoclonal Antibody (145-2C11) at 1  $\mu$ g/mL (100  $\mu$ L/well) can bind Biotinylated Mouse CD3E&CD3G Heterodimer Protein, His,Avitag&Flag Tag (Cat. No. CDG-M58D2) with a linear range of 5-78 ng/mL (QC 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**

