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

Catalog # CDG-R82D4





### **Synonym**

CD3 epsilon & CD3 gamma, CD3E & CD3G

#### Source

Biotinylated Rat CD3E&CD3G Heterodimer Protein, His,Avitag&Flag Tag(CDG-R82D4) is expressed from human 293 cells (HEK293). It contains AA Gln 21 - Asp 103 (CD3E) & Gln 23 - Ser 116 (CD3G) (Accession # NP 001101610.1 (CD3E) & NP 001071114.1 (CD3G)).

Predicted N-terminus: Gln 21 (CD3E) & Gln 23 (CD3G)

# **Molecular Characterization**

CD3E (Gln 21 - Asp 103) NP_001101610.1	Poly-his	Avi
CD3G (Gln 23 - Ser 116) NP_001071114.1	Flag	

Biotinylated Rat CD3E&CD3G Heterodimer Protein, His,Avitag&Flag Tag is produced by co-expression of CD3E and CD3G, has a calculated MW of 16.7 kDa (CD3E) and 15.7 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 22-25 kDa under reducing (R) condition, and 40-45 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.

# **Purity**

>90% as determined by SDS-PAGE.

#### **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

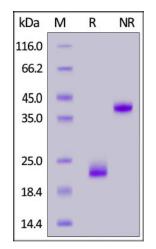
For long term storage, the product should be stored at lyophilized state at -20 $^{\circ}$ C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

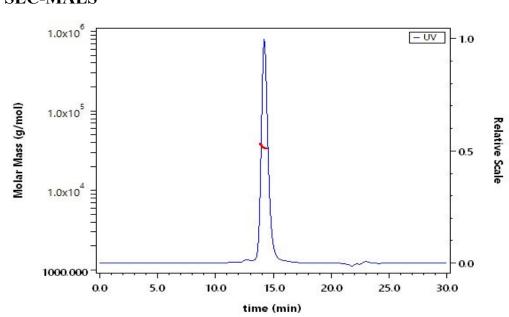
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

# **SDS-PAGE**



Biotinylated Rat CD3E&CD3G Heterodimer Protein, His,Avitag&Flag 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 90%.

# SEC-MALS



The purity of Biotinylated Rat CD3E&CD3G Heterodimer Protein, His,Avitag&Flag Tag (Cat. No. CDG-R82D4) is more than 85% and the



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molecular weight of this protein is around 30-40 kDa verified by SEC-MALS. Report

# 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.

