

# Biotinylated Human CD3E&CD3G/CD3 epsilon&CD3 gamma Protein



Cat. No. CD3-HM557B

| Description      |                                                                                                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source           | Recombinant Biotinylated Human CD3E&CD3G/CD3 epsilon&CD3 gamma Protein is expressed from HEK293 with hFc tag and Avi tag at the C-Terminus.<br>It contains Asp23-Asp126(CD3E) & Gln23-Ser116(CD3G). |
| Accession        | P07766(CD3E)&P09693(CD3G)                                                                                                                                                                           |
| Molecular Weight | The protein has a predicted MW of 40 kDa (CD3E) and 36.5 kDa (CD3G). Due to glycosylation, the protein migrates to 48-55 kDa based on Bis-Tris PAGE result.                                         |
| Endotoxin        | Less than 1EU per µg by the LAL method.                                                                                                                                                             |
| Purity           | > 95% as determined by Bis-Tris PAGE<br>> 95% as determined by HPLC                                                                                                                                 |

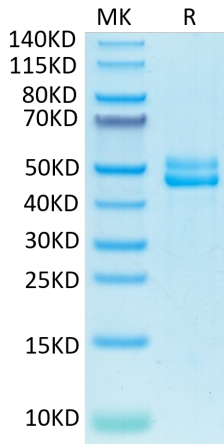
| Formulation and Storage |                                                                                                                                                                                                                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Formulation             | Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.                                                                                          |
| Reconstitution          | Centrifuge the tube before opening. Reconstituting to a concentration more than 100 µg/ml is recommended. Dissolve the lyophilized protein in distilled water.                                                          |
| Storage                 | -20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles. |

**Background**

T-cell surface glycoprotein CD3 epsilon&CD3 gamma chain, also known as CD3E&CD3G, are single-pass type I membrane proteins. When antigen presenting cells (APCs) activate T-cell receptor (TCR), TCR-mediated signals are transmitted across the cell membrane by the CD3 chains CD3D, CD3E, CD3G and CD3Z. All CD3 chains contain immunoreceptor tyrosine-based activation motifs (ITAMs) in their cytoplasmic domain.

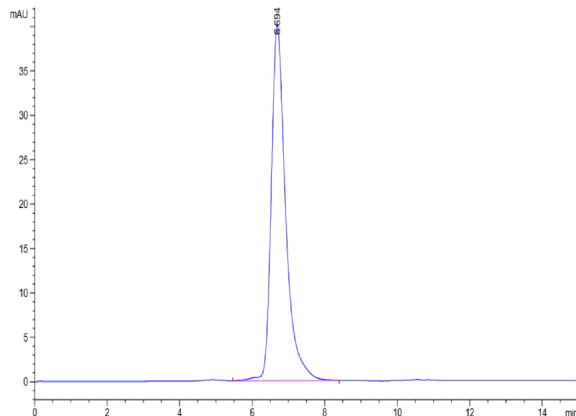
## Assay Data

### Bis-Tris PAGE



Biotinylated CD3E&CD3G on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

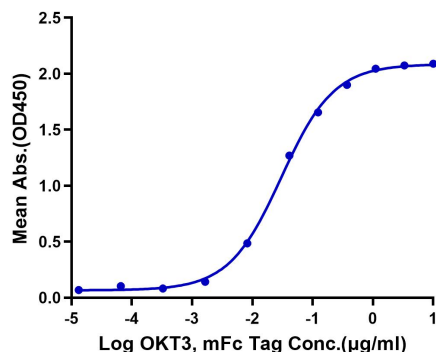


The purity of Biotinylated Human CD3E&CD3G is greater than 95% as determined by SEC-HPLC.

Assay Data

ELISA Data

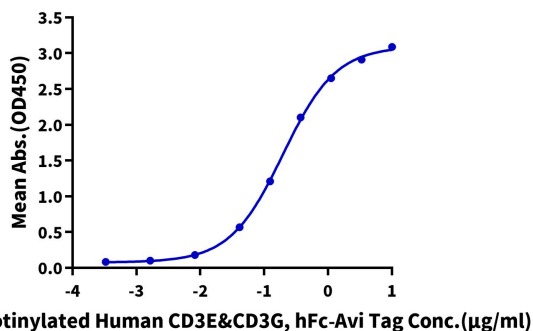
**Biotinylated Human CD3E&CD3G, hFc Tag ELISA**  
0.1µg Biotinylated Human CD3E&CD3G, hFc Tag Per Well



Immobilized Biotinylated Human CD3E&CD3G, hFc Tag at 1µg/ml (100µl/Well) on streptavidin (5µg/ml) precoated plate. Dose response curve for OKT3, mFc Tag with the EC50 of 30.3ng/ml determined by ELISA (QC Test).

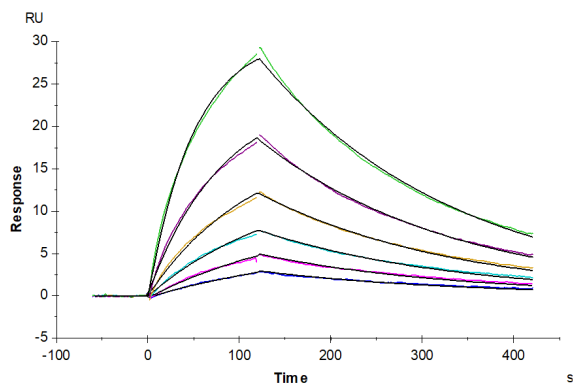
ELISA Data

**Biotinylated Human CD3E&CD3G, hFc-Avi Tag ELISA**  
0.5µg Anti-CD3 Anitibody, hFc Tag Per Well



Immobilized Anti-CD3 Anitibody, hFc Tag at 5µg/ml(100µl/well) on the plate. Dose response curve for Biotinylated Human CD3E&CD3G, hFc-Avi Tag with the EC50 of 0.20µg/ml determined by ELISA.

SPR Data



Anti-CD3 Antibody, hFc Tag immobilized on CM5 Chip can bind Biotinylated Human CD3E&CD3G, hFc-Avi Tag with an affinity constant of 0.25 µM as determined in SPR assay (Biacore T200).