



### Synonym

FLJ18683,T3E,TCRE,CD3E,CD3-epsilon

### Source

MABSol® Biotinylated Human CD3E, His Tag, primary amine labeling (CDE-H8224) is expressed from human HEK293 cells. It contains AA Asp 23 - Asp 126 (Accession # [NP\\_000724.1](#)).

Predicted N-terminus: Asp 23

### Molecular Characterization

CD3E(Asp 23 - Asp 126)  
NP\_000724.1 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 16.9 kDa. The protein migrates as 19-24 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

### Labeling

*The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with biotins using standard chemical labeling method. A standard biotin reagent (13.5 angstroms) is used in this product.*

### 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.

>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

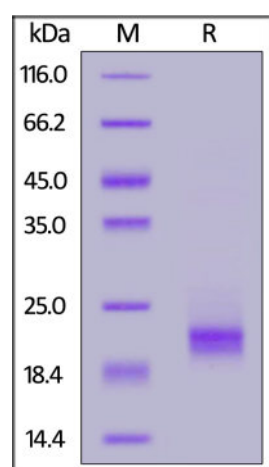
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

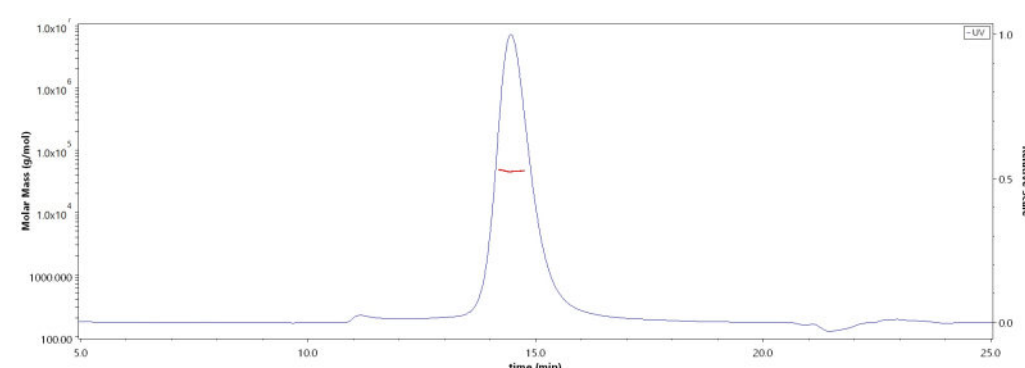
### SDS-PAGE



Biotinylated Human CD3E, His Tag, primary amine labeling on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

### Bioactivity-ELISA

### SEC-MALS

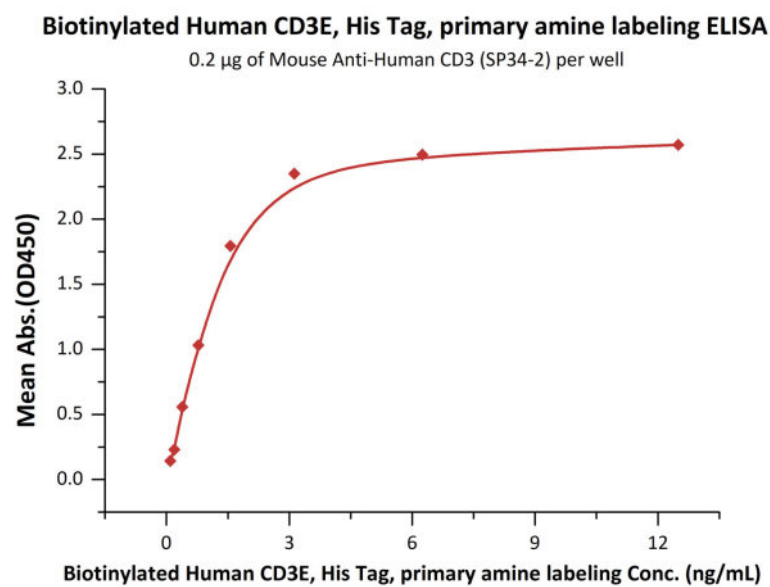


The purity of Biotinylated Human CD3E, His Tag, primary amine labeling (Cat. No. CDE-H8224) is more than 90% and the molecular weight of this protein is around 43-55 kDa verified by SEC-MALS.

[Report](#)

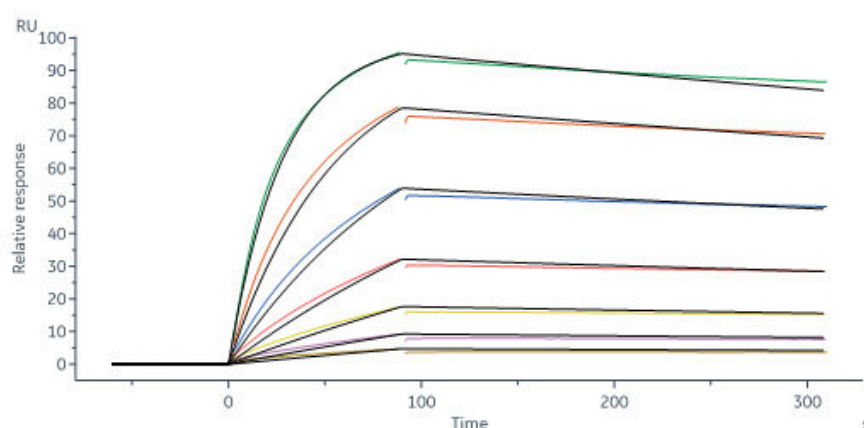
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Immobilized Mouse Anti-Human CD3 (SP34-2) at 2 µg/mL (100 µL/well) can bind Biotinylated Human CD3E, His Tag, primary amine labeling (Cat. No. CDE-H8224) with a linear range of 0.1-3 ng/mL (QC tested).

### Bioactivity-SPR



Bispecific T-cell Engager captured on Protein A Chip can bind Biotinylated Human CD3E, His Tag, primary amine labeling (Cat. No. CDE-H8224) with an affinity constant of 0.815 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

### Background

CD3ε molecule, epsilon is also known as CD3E, is a T-cell surface single-pass type I membrane glycoprotein. CD3E contains 1 Ig-like (immunoglobulin-like) domain and 1 ITAM domain. CD3E, together with CD3-γ, CD3-δ and CD3-ζ, and the T-cell receptor α/β and γ/δ heterodimers, forms the T cell receptor-CD3 complex. This complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. The genes encoding the epsilon, gamma and delta polypeptides are located in the same cluster on chromosome 11. The epsilon polypeptide plays an essential role in T-cell development. CD3E plays an essential role in T-cell development, and defects in CD3E gene cause severe immunodeficiency. CD3E gene has also been linked to a susceptibility to type I diabetes in women. CD3E has been shown to interact with TOP2B, CD3EAP and NCK2.

### Clinical and Translational Updates

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