

**Synonym**

FLJ18683,T3E,TCRE,CD3E,CD3-epsilon

Source

Biotinylated Human CD3 epsilon, His,Avitag(CDE-H82E1) is expressed from human 293 cells (HEK293). It contains AA Asp 23 - Asp 126 (Accession # [P07766-1](#)).

Predicted N-terminus: Asp 23

Molecular Characterization

CD3 epsilon(Asp 23 - Asp 126)
P07766-1 Poly-his Avi

This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 15.5 kDa. The protein migrates as 17-18 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ 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 µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

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.

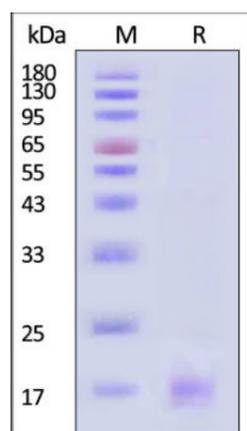
Storage

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

Please avoid repeated freeze-thaw cycles.

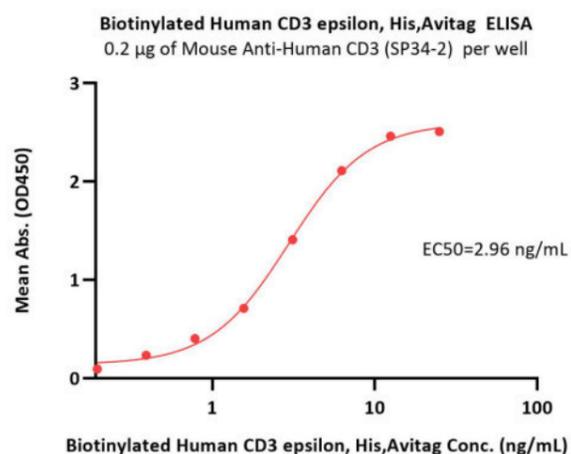
This product is stable after storage at:

- -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 CD3 epsilon, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

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Immobilized Mouse Anti-Human CD3 (SP34-2) at 2 µg/mL (100 µL/well) can bind Biotinylated Human CD3 epsilon, His,Avitag (Cat. No. CDE-H82E1) with a linear range of 0.2-6 ng/mL (QC 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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