



## Synonym

FLJ18683,T3E,TCRE,CD3E,CD3-epsilon

## Source

Human CD3 epsilon, Fc,His Tag(CDE-H5256) is expressed from human 293 cells (HEK293). 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	Fc(Pro 100 - Lys 330) P01857	Poly-his
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This protein carries a human IgG1 Fc tag at the C-terminus, followed by a polyhistidine tag.

The protein has a calculated MW of 39.2 kDa. The protein migrates as 43-50 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## Purity

>95% 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

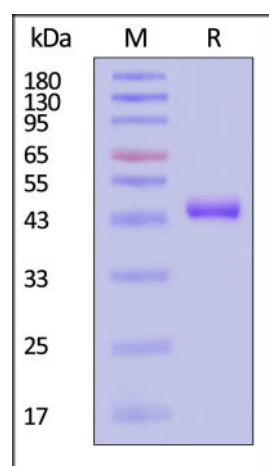
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

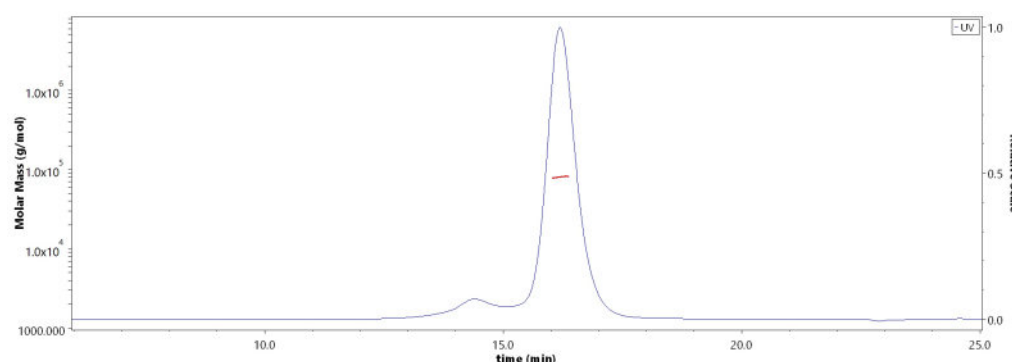
## SDS-PAGE



Human CD3 epsilon, Fc,His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

## Bioactivity-ELISA

## SEC-MALS



The purity of Human CD3 epsilon, Fc,His Tag (Cat. No. CDE-H5256) is more than 85% and the molecular weight of this protein is around 75-100 kDa verified by SEC-MALS.

[Report](#)

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and more!

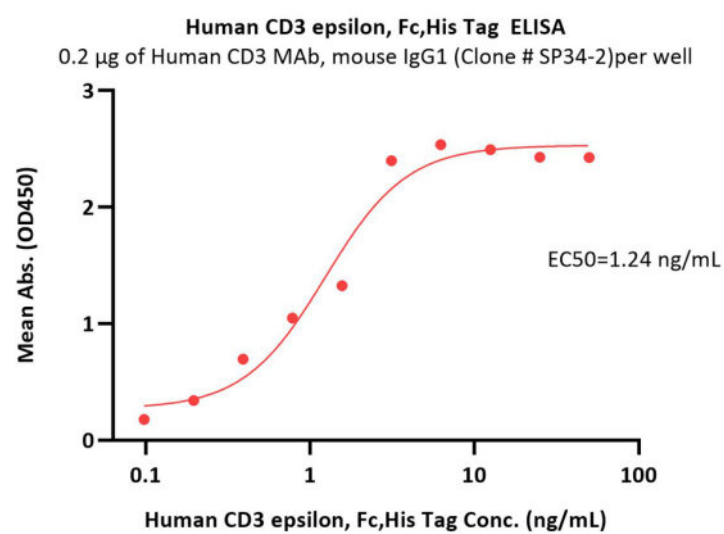


# Human CD3 epsilon Protein, Fc,His Tag (MALS verified)

Catalog # CDE-H5256

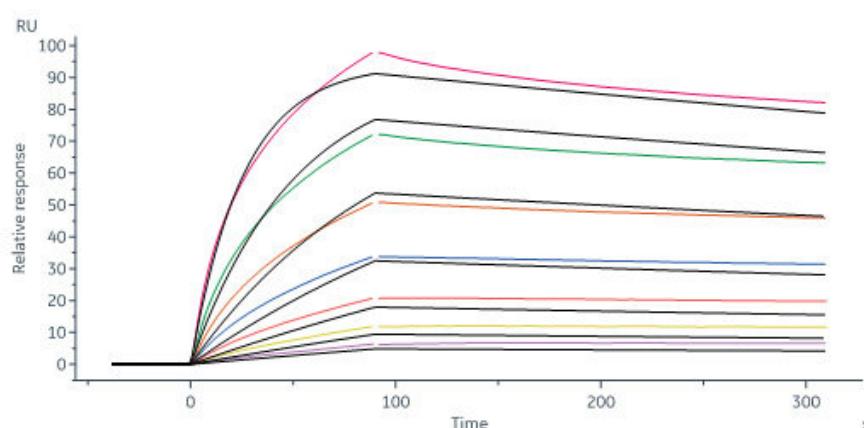


BIOSYSTEMS  
**Acro**  
Surprise Inside!



Immobilized Anti Human CD3 MAb, mouse IgG1 (Clone # SP34-2) at 2 µg/mL (100 µL/well) can bind Human CD3 epsilon, Fc,His Tag (Cat. No. CDE-H5256) with a linear range of 0.1-3 ng/mL (Routinely tested).

## Bioactivity-SPR



Bispecific T-cell Engager immobilized on CM5 Chip can bind Human CD3 epsilon, Fc,His Tag (Cat. No. CDE-H5256) with an affinity constant of 17.5 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-gamma, CD3-delta and CD3-zeta, and the T-cell receptor alpha/beta and gamma/delta 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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11/11/2024