

Synonym

FLJ18683,T3E,TCRE,CD3E,CD3-epsilon

Source

Human CD3 epsilon, Mouse IgG2a Fc Tag(CDN-H5253) 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	mFc(Glu 98 - Lys 330) P01863
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This protein carries a mouse IgG2a Fc tag at the C-terminus.

The protein has a calculated MW of 38.6 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 / rFC method.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM Glycine, 25 mM Arginine, 150 mM NaCl, pH7.5 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

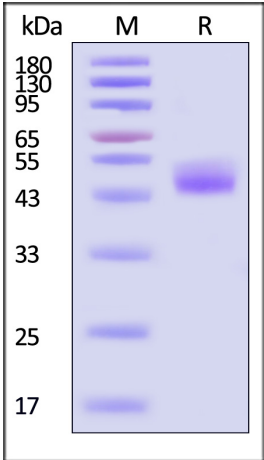
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

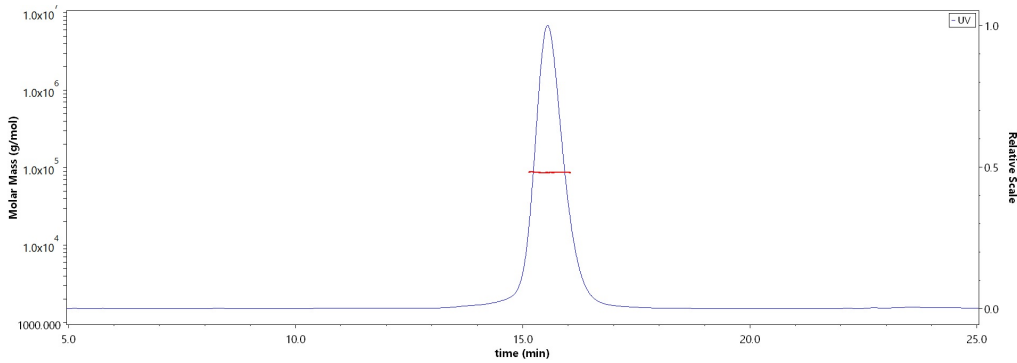
SDS-PAGE



Human CD3 epsilon, Mouse IgG2a Fc 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

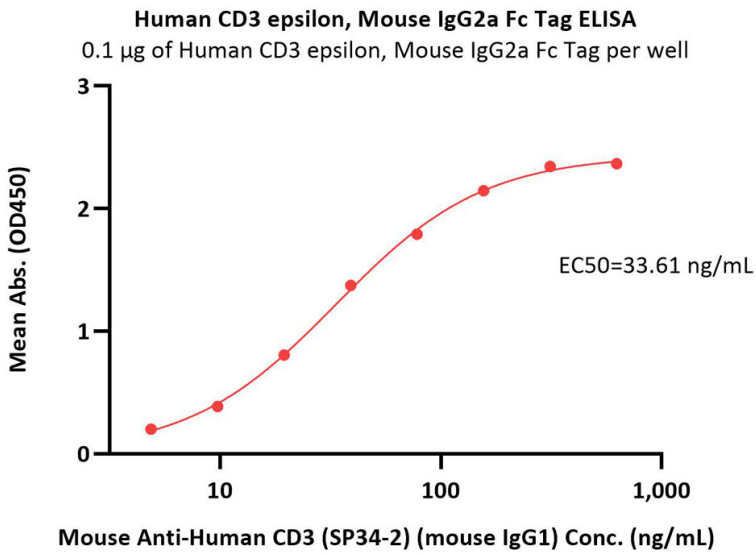
SEC-MALS



The purity of Human CD3 epsilon, Mouse IgG2a Fc Tag (Cat. No. CDN-H5253) is more than 90% and the molecular weight of this protein is around 75-90 kDa verified by SEC-MALS.

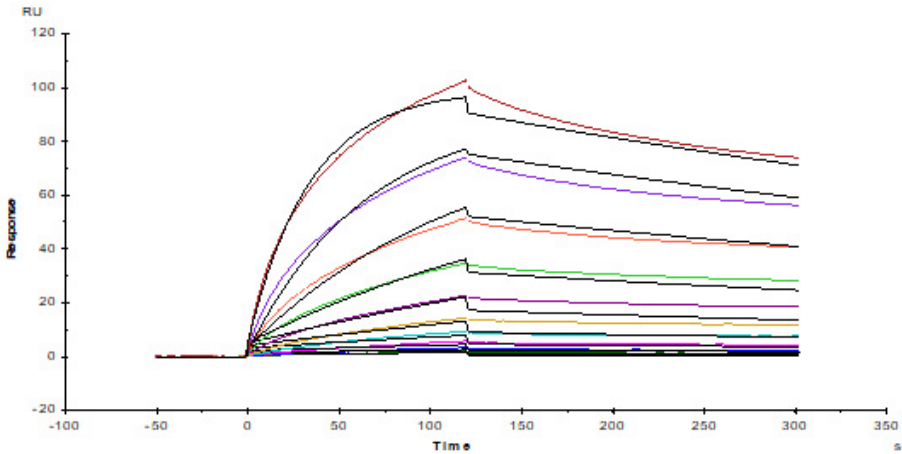
[Report](#)



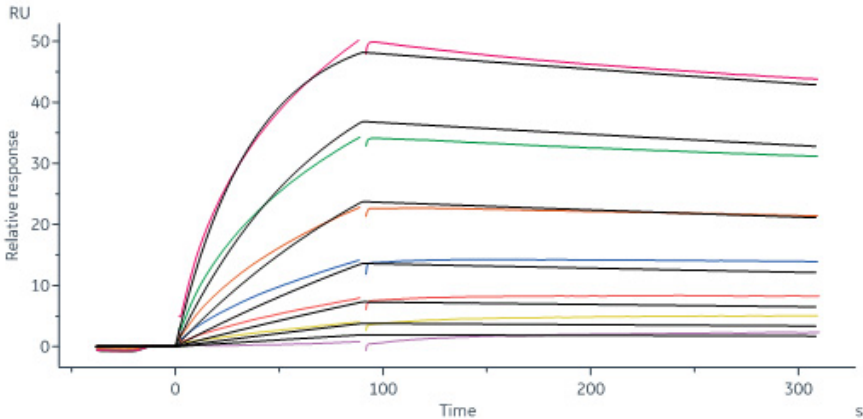


Immobilized Human CD3 epsilon, Mouse IgG2a Fc Tag (Cat. No. CDN-H5253) at 1 µg/mL (100 µL/well) can bind Mouse Anti-Human CD3 (SP34-2) (mouse IgG1) with a linear range of 9.8-39 ng/mL (QC tested).

Bioactivity-SPR



Anti-Human CD3 mAb, mouse IgG1 (Clone # SP34-2) immobilized on CM5 Chip can bind Human CD3 epsilon, Mouse IgG2a Fc Tag (Cat. No. CDN-H5253) with an affinity constant of 75.2 nM as determined in a SPR assay (Biacore T200) (Routinely tested).



Bispecific T-cell Engager immobilized on CM5 Chip can bind Human CD3 epsilon, Mouse IgG2a Fc Tag (Cat. No. CDN-H5253) with an affinity constant of 20.1 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.

