Biotinylated Human CD3 epsilon Protein, His Tag, ultra sensitivity (primary amine labeling) (MALS verified)

Catalog # CDE-H8224

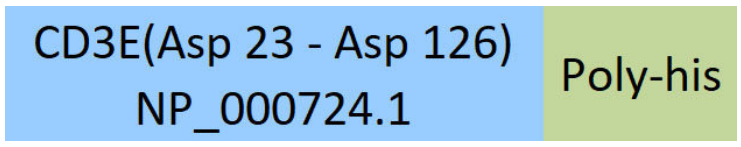
Synonym

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



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

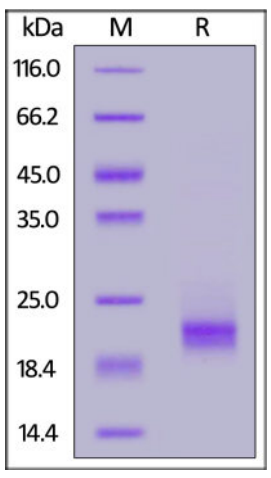
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

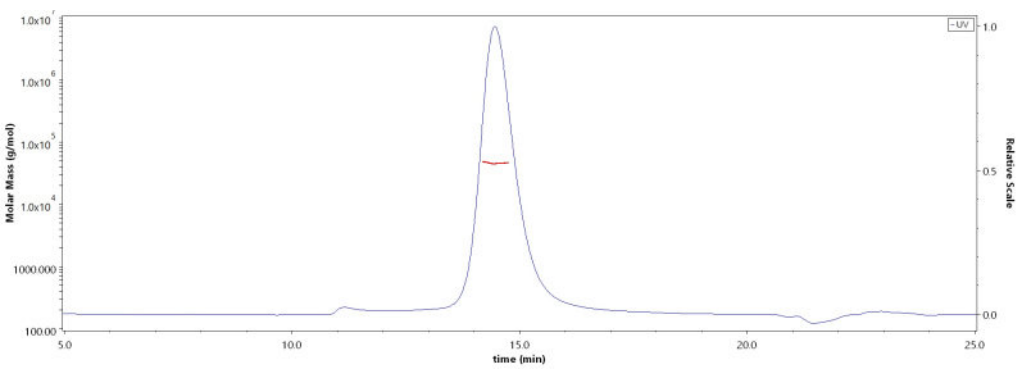
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



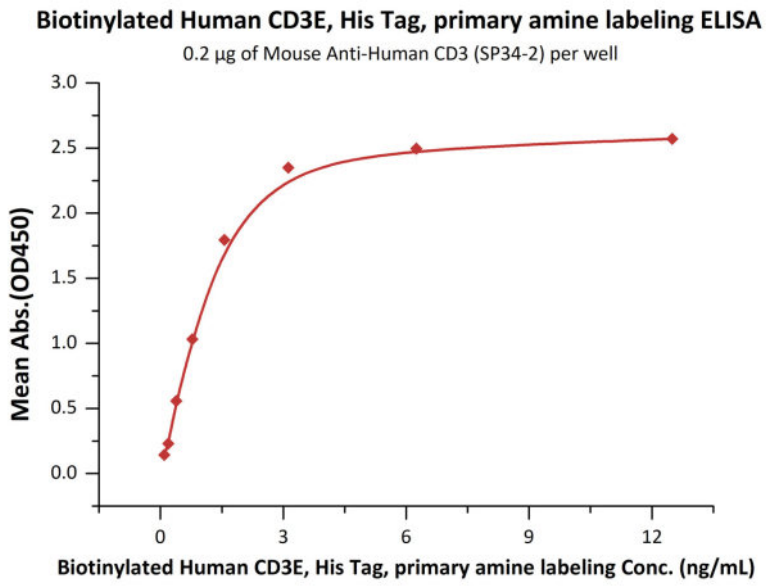
Biotinylated Human CD3E, His Tag, primary amine labeling on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

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

Bioactivity-ELISA



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).

Background

CD3e 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