Human CD3 epsilon & CD3 delta Heterodimer Protein, His Tag&Tag Free

Catalog # CDD-H52W1AI2

Application

Human CD3E&CD3D Heterodimer Protein, His Tag&Tag Free AIDD-Ready protein is designed for direct use in SPR assays. It is supplied in a sugar-free, glycerol-free formulation to eliminate refractive index interference in SPR. No desalting or buffer exchange is required before use, simplifying the SPR workflow. Each tube features a unique barcode and bottom code for precise sample identification, supporting automated, high-throughput workflows and accelerating the transition from AI prediction to wet-lab validation.

Features and Advantages

- **Directly compatible with SPR:** No desalting or buffer exchange required; supplied as a liquid to reduce sample preparation and improve experimental efficiency.
- **High batch-to-batch consistency:** Each lot is released using SPR QC to ensure experimental reproducibility.
- **Validated with representative drugs:** SPR binding activity is validated using representative drug antibodies to ensure suitability for drug screening and evaluation.
- **Unique Tube Identification:** Each tube features a unique barcode and bottom code, supporting automated and high-throughput workflows. To request the product manifest, please contact our Technical Support team or click the button below.

Synonyms

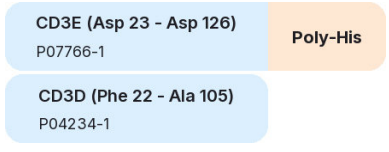
CD3E & CD3D, CD3 delta & CD3 epsilon

Source

Human CD3E&CD3D Heterodimer Protein, His Tag&Tag Free (CDD-H52W1AI2) is expressed from human 293 cells (HEK293). It contains AA Asp 23 - Asp 126 (CD3E) & Phe 22 - Ala 105 (CD3D) (Accession # P07766-1 (CD3E) & P04234-1 (CD3D)).

Predicted N-terminus: Asp 23 (CD3E) & Phe 22 (CD3D)

Molecular Characterization



The protein has a calculated MW of 16.6 kDa (CD3E) & 13.4 kDa (CD3D). The protein migrates as 20 kDa, 22 kDa and 25-30 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-HPLC.

Formulation

Formulated in a proprietary trehalose-free buffer, supplied ready-to-use for SPR/BLI analysis - no buffer exchange required.

For detailed formulation, please refer to the batch-specific COA.

Shipping and Storage

This product is supplied and shipped on dry ice.

Please avoid repeated freeze-thaw cycles.

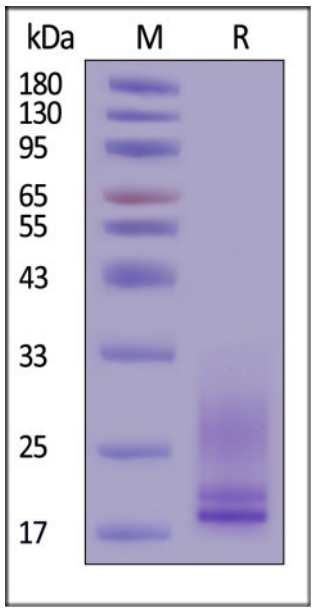
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 12 months under sterile conditions.

ACRO Quality Management System

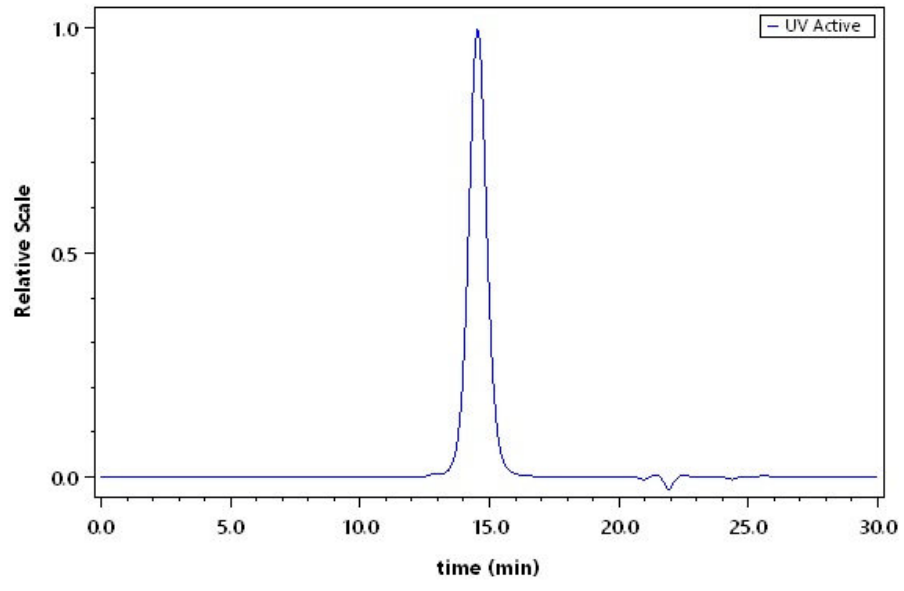
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



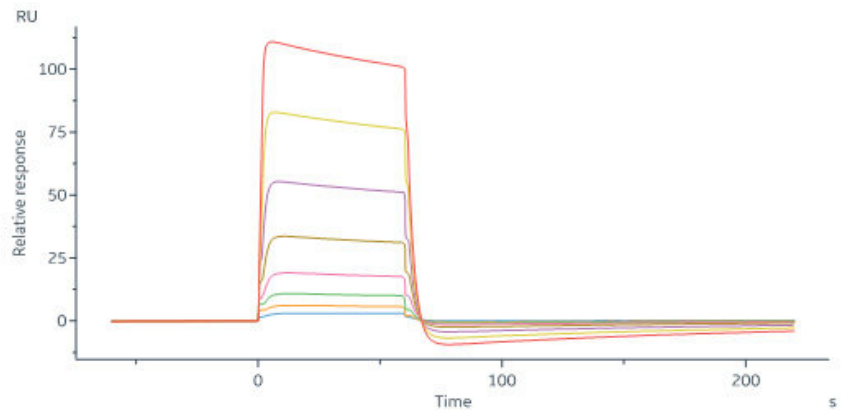
Human CD3E&CD3D Heterodimer Protein, His Tag&Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-HPLC



The purity of Human CD3E&CD3D Heterodimer Protein, His Tag&Tag Free (Cat. No. CDD-H52W1AI2) was greater than 90% as determined by SEC-HPLC.

Activity-SPR



Monoclonal Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3), premium grade (Cat. No. CDE-M120a) captured on Protein A Chip can bind Human CD3E&CD3D Heterodimer Protein, His Tag&Tag Free (Cat. No. CDD-H52W1AI2) with an affinity constant of 493 nM as determined in a SPR assay (Biacore 8K) (QC tested).

Background

T-cell surface glycoprotein CD3 delta & CD3 epsilon chain, also known as CD3D & CD3E or CD3D&CD3E respectively, are single-pass type I membrane proteins. CD3D, together with CD3- epsilon(CD3E) , CD3-gamma and CD3-zeta, and the T-cell receptor alpha/beta and gamma/delta heterodimers, forms the T cell receptor-CD3 complex. T cell receptor-CD3 complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways.

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