

# Human CD3 epsilon&CD3 gamma Heterodimer Protein, His Tag&Tag Free

Catalog # CDG-H52W5AI



## Application

Human CD3E&CD3G 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 and supporting high-throughput experimental validation to accelerate 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.

## Synonyms

CD3 epsilon & CD3 gamma, CD3E & CD3G

## Source

Human CD3E&CD3G Heterodimer Protein, His Tag&Tag Free (CDG-H52W5AI) is expressed from human 293 cells (HEK293). It contains AA Asp 23 - Asp 126 (CD3E) & Gln 23 - Ser 116 (CD3G) (Accession # [NP\\_000724.1](#) (CD3E) & [AAI13831](#) (CD3G)).

Predicted N-terminus: Asp 23 (CD3E) & Gln 23 (CD3G)

## Molecular Characterization

CD3E (Asp 23 - Asp 126)  
NP\_000724.1

Poly-His

CD3G (Gln 23 - Ser 116)  
AAI13831

The protein has a calculated MW of 16.9 kDa (CD3E) & 14.6 kDa (CD3G). The protein migrates as 19 kDa, 21 kDa and 26-27 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

The protein is designed as a heterodimer.

## Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Supplied as 0.2 µm filtered solution in PBS, pH7.4.

Contact us for customized product form or formulation.

## Shipping and Storage

This product is supplied and shipped on dry ice.

**Please avoid repeated freeze-thaw cycles.**

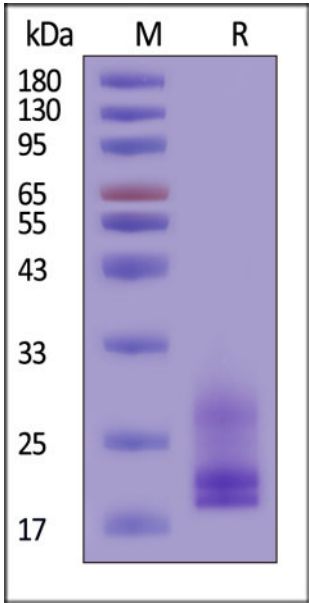
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

## ACRO Quality Management System

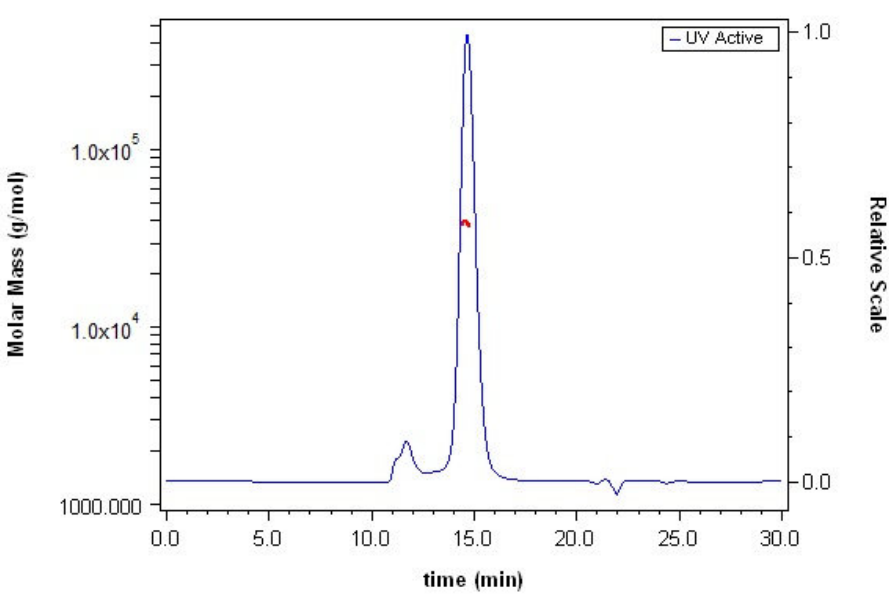
- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



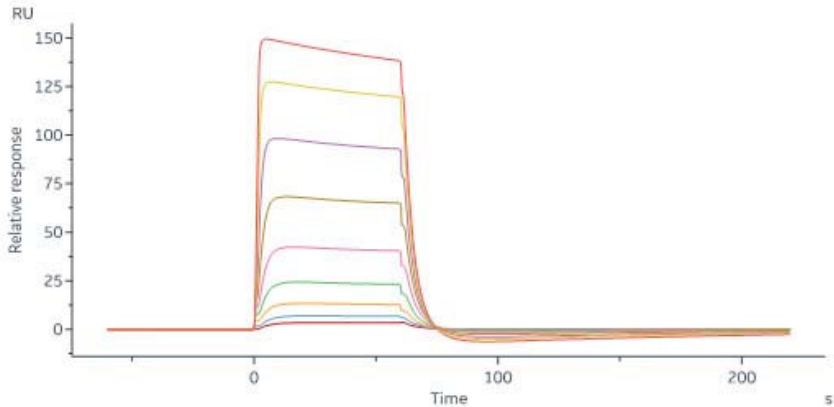
Human CD3E&CD3G Heterodimer Protein, His Tag&Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

SEC-MALS



The purity of Human CD3E&CD3G Heterodimer Protein, His Tag&Tag Free (Cat. No. CDG-H52W5AI) is more than 90% and the molecular weight of this protein is around 30-45 kDa verified by SEC-MALS.

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&CD3G Heterodimer Protein, His Tag&Tag Free (Cat. No. CDG-H52W5AI) with an affinity constant of 195 nM as determined in a SPR assay (Biacore 8K) (QC tested).

Background

T-cell surface glycoprotein CD3 delta & CD3 gamma chain, also known as CD3D & CD3G or CD3D&CD3G 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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