



## Application

- Immunization
- Affinity testing ([SPR](#) / [BLI](#))
- Screening ([ELISA](#))

## Synonym

NY-ESO-1 TCR & CD3E & CD3D & CD3G & CD3Z

## Source

Detergent Human NY-ESO-1 TCR & CD3 Protein Complex, His,Flag Tag (NYZ-H52D4) is expressed from human 293 cells (HEK293). It contains AA (Accession # [P07766-1](#) & [P04234-1](#) & [P09693-1](#) & [P20963-1](#)).

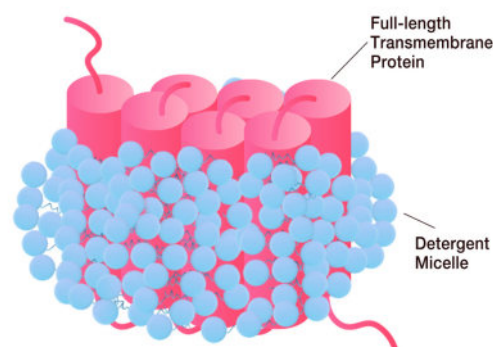
Predicted N-terminus: Phe

## Molecular Characterization

The protein has a calculated MW of 64.8 kDa & 80.2 kDa.

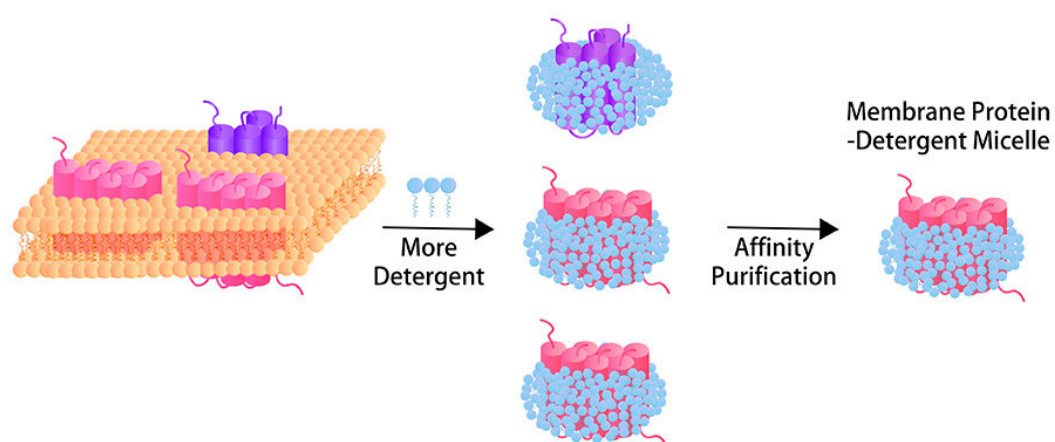
\*The Buffer A (Cat. No. [DN-12](#)) is sold separately and not included in protein, you can follow [the link](#) for product information.

### • Structure



Each full-length transmembrane protein is encapsulated by detergent micelle.

### • Synthesis Process



Through **mild detergent micelle extraction**, dedicated solubilization, and stringent affinity purification, we maximally retain the native transmembrane conformation of full-length transmembrane proteins throughout downstream purification. This workflow yields purified, detergent-solubilized proteins free of unrelated membrane impurities and exogenous scaffold proteins, with **exceptional purity, accurate quantitation**, and well-preserved biological activity—ideal for immunization, binding assays in antibody discovery and screening ([ELISA](#)) and affinity testing ([SPR](#) and [BLI](#)), etc.

## Purity

>90% as determined by SDS-PAGE.

## Formulation

**This product is not suitable for cell based experiments due to cytotoxicity of detergent.**

**Detergent buffer is INDISPENSABLE to keep membrane protein soluble and active, under no circumstances should you remove detergent.**

**Detergent buffer is sold separately and not included in protein, and please contact us if you need the buffer.**

**If glycerol is not compatible with your application, remove glycerol just before the immediate experiment, and NEVER store glycerol-free protein solution.**

Supplied as 0.2  $\mu$ m filtered solution in 50 mM HEPES, 150 mM NaCl, 0.06% Buffer A, pH7.5 with glycerol as protectant.

Contact us for customized product form or formulation.

## Shipping

**This product is supplied and shipped with dry ice, please inquire the shipping cost.**

## Storage

Please avoid repeated freeze-thaw cycles.

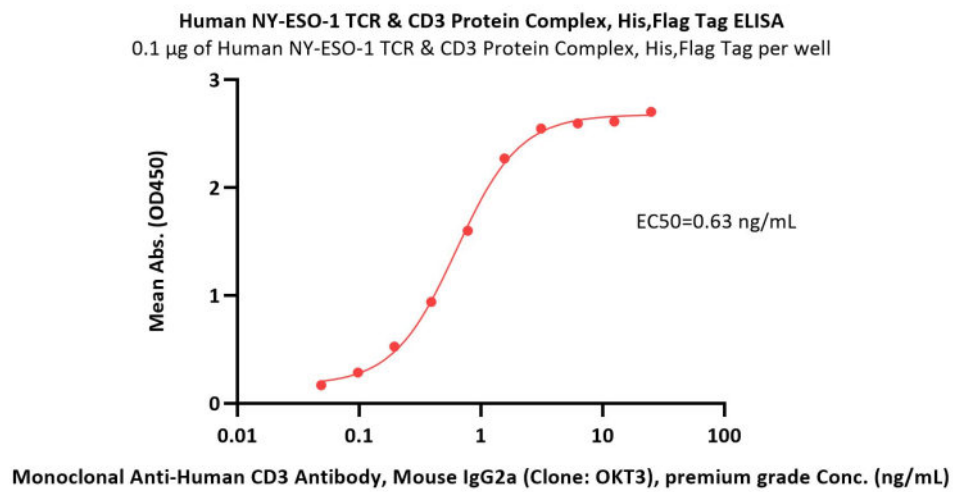
This product is stable after storage at:

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

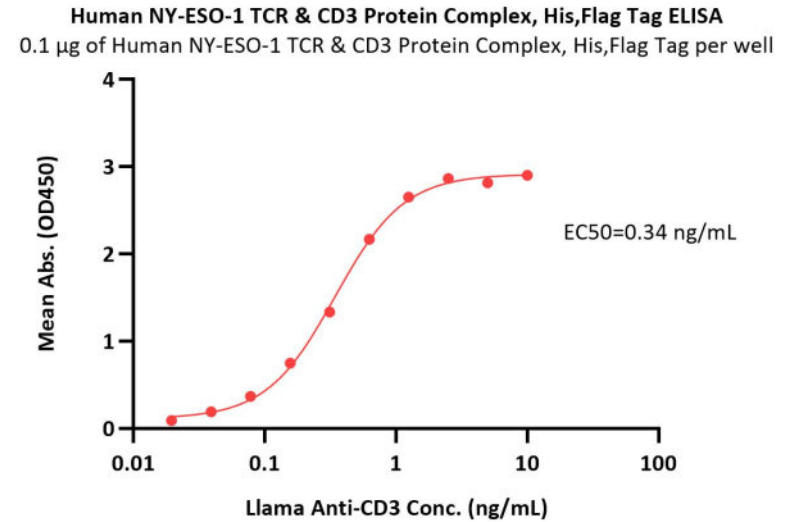
## ACRO Quality Management System

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

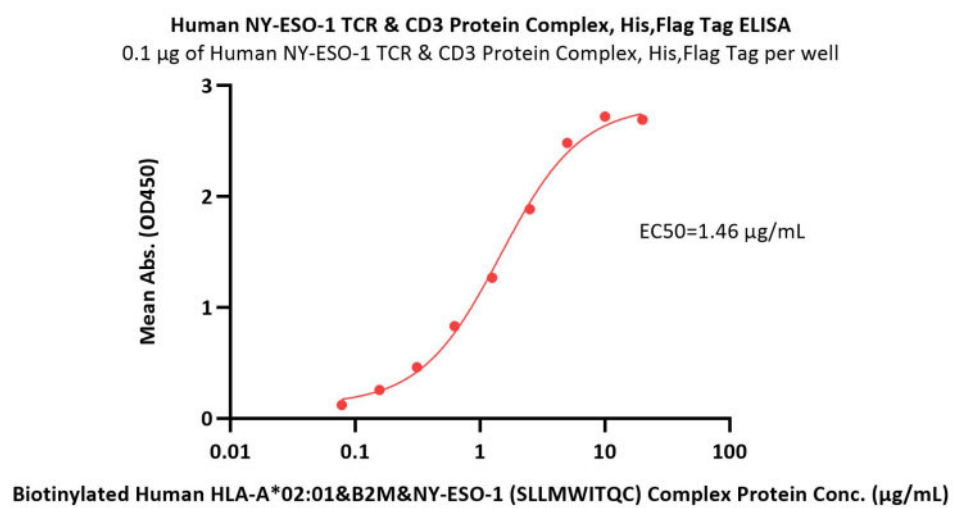
## Bioactivity-ELISA



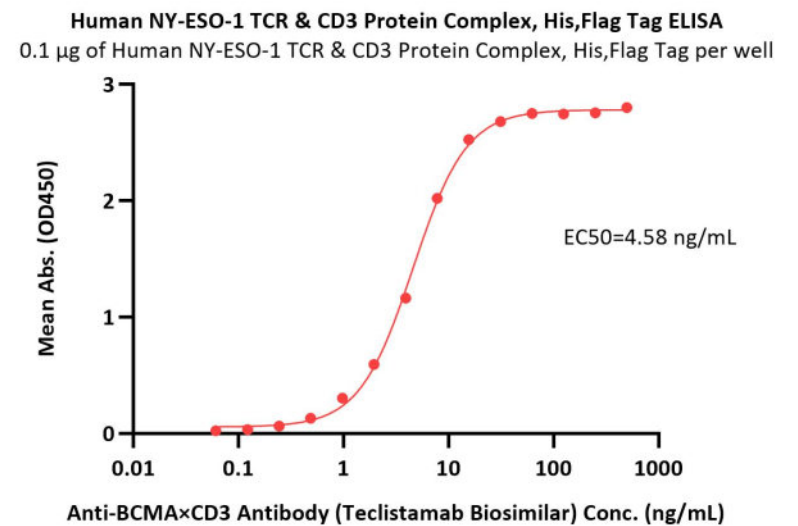
Immobilized Human NY-ESO-1 TCR & CD3 Protein Complex, His,Flag Tag (Cat. No. NYZ-H52D4) at 1 µg/mL (100 µL/well) can bind Monoclonal Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3), premium grade (Cat. No. CDE-M120a) with a linear range of 0.05-2 ng/mL (QC tested).



Immobilized Human NY-ESO-1 TCR & CD3 Protein Complex, His,Flag Tag (Cat. No. NYZ-H52D4) at 1 µg/mL (100 µL/well) can bind Llama Anti-CD3 with a linear range of 0.02-1 ng/mL (QC tested).

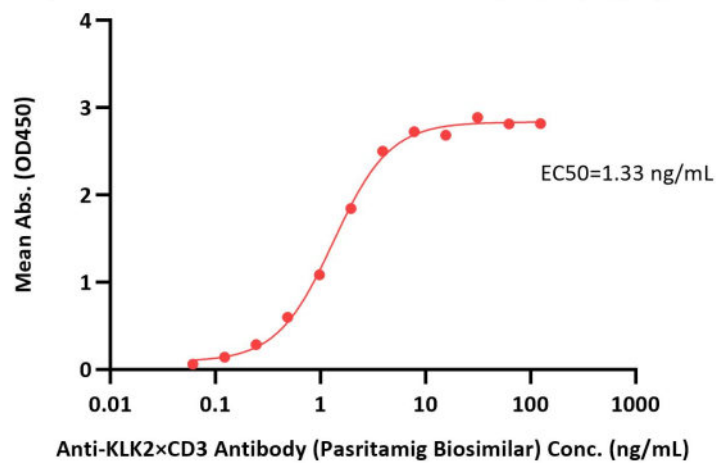


Immobilized Human NY-ESO-1 TCR & CD3 Protein Complex, His,Flag Tag (Cat. No. NYZ-H52D4) at 1 µg/mL (100 µL/well) can bind Biotinylated Human HLA-A\*02:01&B2M&NY-ESO-1 (SLLMWITQC) Complex Protein (Cat. No. HL1-H82E6) with a linear range of 0.08-5 µg/mL (Routinely tested).



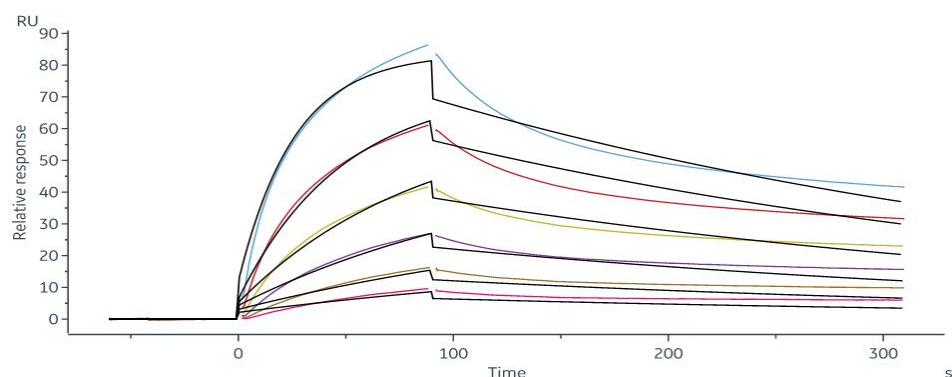
Immobilized Human NY-ESO-1 TCR & CD3 Protein Complex, His,Flag Tag (Cat. No. NYZ-H52D4) at 1 µg/mL (100 µL/well) can bind Anti-BCMAxCD3 Antibody (Teclistamab Biosimilar) with a linear range of 0.06-16 ng/mL (Routinely tested).

**Human NY-ESO-1 TCR & CD3 Protein Complex, His,Flag Tag ELISA**  
 0.1 µg of Human NY-ESO-1 TCR & CD3 Protein Complex, His,Flag Tag per well



Immobilized Human NY-ESO-1 TCR & CD3 Protein Complex, His,Flag Tag (Cat. No. NYZ-H52D4) at 1 µg/mL (100 µL/well) can bind Anti-KLK2xCD3 Antibody (Pasritamig Biosimilar) with a linear range of 0.06-8 ng/mL (Routinely tested).

## Bioactivity-SPR



Monoclonal Anti-Human CD3 Antibody, Mouse IgG2a (Clone: OKT3), premium grade (Cat. No. CDE-M120a) captured on CM5 chip via anti-mouse antibodies surface can bind Human NY-ESO-1 TCR & CD3 Protein Complex, His,Flag Tag (Cat. No. NYZ-H52D4) with an affinity constant of 8.12 nM as determined in a SPR assay (in presence of DDM and CHS) (Biacore 8K) (Routinely tested).

## Background

Cluster of Differentiation 3 (CD3) is a pivotal multimeric T cell co-receptor complex essential for adaptive immune responses. Composed of epsilon ( $\epsilon$ ), gamma ( $\gamma$ ), delta ( $\delta$ ), and zeta ( $\zeta$ ) polypeptide chains forming three distinct dimers ( $\epsilon\gamma$ ,  $\epsilon\delta$ ,  $\zeta\zeta$ ), CD3 non-covalently associates with the T-cell receptor (TCR) to establish the critical TCR/CD3 receptor complex on T cell surfaces. Structurally, CD3 proteins belong to the immunoglobulin superfamily, featuring a transmembrane domain, an N-terminal extracellular region with immunoglobulin-like domains, and cytoplasmic tails embedded with immunoreceptor tyrosine-based activation motifs (ITAMs). These ITAMs are fundamental for initiating signal transduction upon T cell receptor engagement, thereby activating both CD4<sup>+</sup> T helper and CD8<sup>+</sup> cytotoxic T cells. As a defining marker of the T cell lineage, CD3's central role in T cell activation makes its modulation, via stimulating or blocking antibodies, a promising therapeutic avenue for conditions like organ transplant rejection and autoimmune diseases.

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