Product Name: Bioactive, Recombinant Human CD8 alpha Protein Dimer, His Tag

Product Code: CSP-25135-01

FOR RESEARCH USE ONLY (RUO)

Protein Name: CD8a

Alternate Name(s): T-cell surface glycoprotein CD8 alpha chain, CD8α, CD8, Leu2, MAL

Expression Host
HEK293T

Amino Acid Range
S22-D182

Protein Construct
CD8α homodimer protein contains the CD8α extracellular domain (UniProt# 1P01732) fused with a proprietary cis-dimer motif followed by a His tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight
51 kDa. The migration range of the heterodimer protein with glycosylation under non-reducing condition is between 60 and 85 kDa on SDS PAGE.

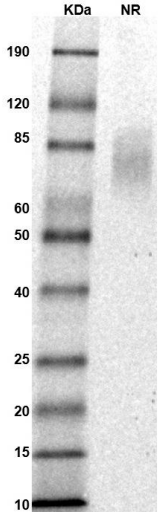
Purity
Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition

Formulation
0.22µm filtered PBS, pH 7.4

Stability & Storage
-80^{0}C

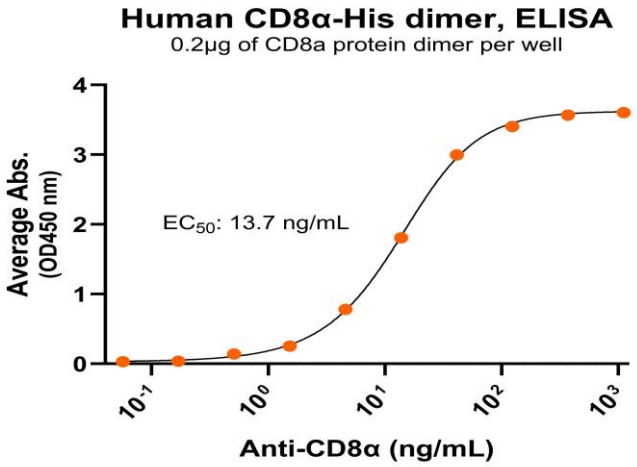
Shipping Conditions
Frozen Dry Ice

SDS-PAGE



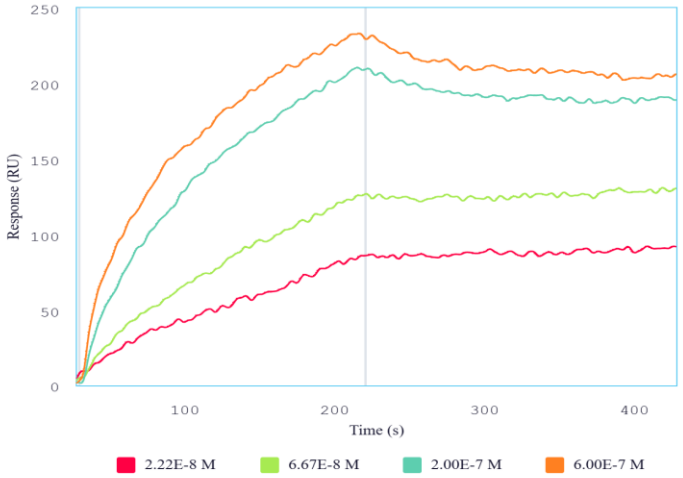
MW: Molecular Weight marker reduced condition
NR: CD8α dimer under non-reduced condition
The migration range of the heterodimer protein with glycosylation under non-reducing condition is between 60 and 85 kDa on SDS PAGE.

Antibody Binding



Immobilized human CD8α protein dimer, His tag (Cat. No. CSP-25135-01) can bind anti-human CD8α polyclonal antibody with half maximal effective concentration (EC50) range of 6.8-27.3 ng/mL (QC tested).

Label Free Binding



Immobilized human PILRα can bind human CD8α protein dimer, His tag (Cat. No. CSP-25135-01) with a KD of 6.8-27.4 nM as determined by LSPR (Nicoya Alto).

Background

Cluster of differentiation 8 alpha (CD8α, CD8a), also known as T-cell surface glycoprotein CD8 alpha chain, is a Type I transmembrane glycoprotein and is a component of the CD8 coreceptor. CD8 is expressed on the T-cell surface as dimers in two isoforms, the CD8αα (CD8 alpha-alpha) homodimer and the CD8αβ (CD8 alpha-beta) heterodimer. CD8 is a key component of T cells, contributing to antigen recognition, immune cell maturation, and immune cell signaling. CD8 acts as the co-receptor for the T-cell receptor (TCR) and binds a major histocompatibility complex (MHC) molecule. CD8α is predominantly expressed on the surface of cytotoxic T cells and contains an extracellular domain with a single immunoglobulin variable (IgV)-like domain and a proline-rich stalk region. PILRα acts as a ligand for CD8α and their interaction plays a crucial role in maintaining CD8+ T cell quiescence. CD8 is highly expressed in T cell lymphoblastic lymphoma and hypo-pigmented mycosis fungoides making it an emerging target of cancer therapeutics.