
Product Name: Human CD7 Protein Dimer, His Tag

Product Code: CSP-26322-01

FOR RESEARCH USE ONLY (RUO)

Protein Name: CD7, Protein Dimer

Alternate Name(s): GP40, LEU-9, TP41, Tp40

Expression Host
HEK293T

Amino Acid Range
A26 - P180

Protein Construct

CD7 dimer protein contains a CD7 extracellular domain (UniProt# P09564) 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

49 kDa. The migration range of the protein dimer with glycosylation under non-reducing condition is 85-120 kDa on SDS-PAGE.

Purity

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

Shipping Conditions

Frozen Ice Packs

Stability & Storage

-20°C

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH 7.4 with 10% trehalose as protectant

Reconstitution of lyophilized product

For best performance, we strongly recommend you reconstitute the lyophilized product with deionized water to a stock solution of 500 µg/mL.

Solubilize for 20 minutes at room temperature with occasional gentle mixing. Avoid shaking or vortexing.

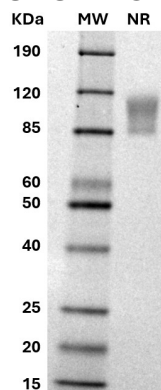
For 25µg product size:

Reconstitute with 50 µL sterile deionized water.

For 100µg product size:

Reconstitute with 200 µL sterile deionized water.

SDS-PAGE

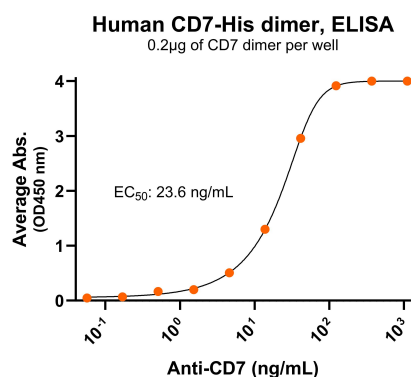


MW: Molecular Weight marker reduced condition

NR: CD7 dimer under non-reduced condition

The migration range of the protein dimer with glycosylation under non-reducing condition is 85-120 kDa on SDS-PAGE.

Antibody Binding



Immobilized human CD7 dimer protein, His Tag (Cat. No. CSP-26322-01) at 2 µg/mL (100 µL/well) can bind anti-human CD7 monoclonal antibody, with half maximal effective concentration (EC₅₀) range of 11.8-47.2 ng/mL (QC tested).

Background

Human Cluster of Differentiation 7 (CD7) is a Type I transmembrane glycoprotein and a member of the immunoglobulin superfamily. CD7 is also known as GP40, LEU-9, TP41, or Tp40. CD7 contains an extracellular region featuring a single IgV-like (immunoglobulin variable-like) domain. The extracellular region is followed by a proline-rich "stalk" that projects the domain away from the cell membrane. CD7 is expressed on T-cells, natural killer (NK) cells and their precursors. CD7 forms cis-homodimer on the cell surface creating a stable platform for ligand engagement. The Ig-like domain mediates cell-to-cell communication by engaging with natural ligands, primarily Galectin-1 and the K12. Upon binding its K12/SECTM1 ligand it acts in a costimulatory role in T-cell activation. CD7 serves as an excellent marker for the detection of T-cell lymphoproliferative disorders.