
Product Name: Bioactive, Human CD4 Protein Dimer, His-Avi Tag

Product Code: CSP-24004-03

FOR RESEARCH USE ONLY (RUO)

Protein Name: CD4, Protein Dimer

Alternate Name(s): IL16R

Expression Host
HEK293T

Amino Acid Range
K26-P396

Protein Construct

CD4 dimer contains CD4 extracellular 4-domains (UniProt# A0A4Y5UGE4) with a homodimer motif and a tandem His-Avi tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight

103 kDa. Migration range of the dimer under non-reducing condition is 85-120kDa 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 a 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.

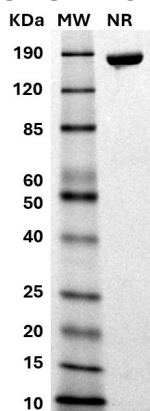
For 25µg product size:

Reconstitute with 50 µL sterile deionized water.

For 100µg product size:

Reconstitute with 200 µL sterile deionized water.

SDS-PAGE

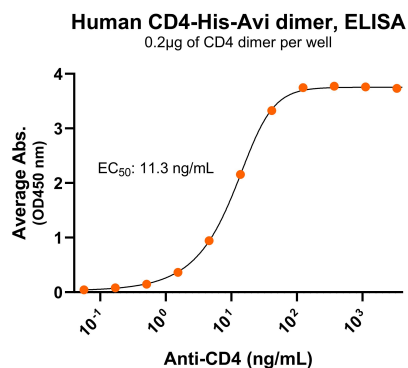


MW: Molecular Weight marker reduced condition

NR: CD4 dimer under non-reduced condition

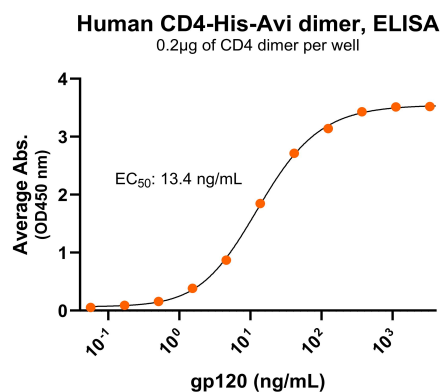
Migration range of the dimer under non-reducing condition is 85-120kDa on SDS PAGE

Antibody Binding



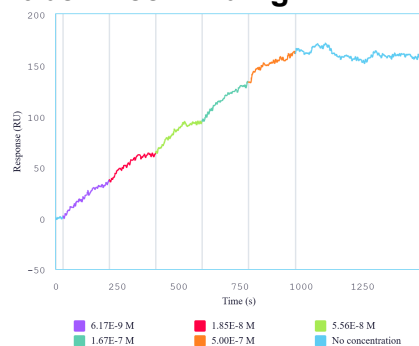
Immobilized human CD4 protein dimer, His-Avi Tag (Cat. No. CSP-24004-03) at 2 µg/mL (100 µL/well) can bind anti-human CD4 monoclonal antibody with half maximal effective concentration (EC50) range of 9.8-39.2 ng/mL (QC tested).

Ligand Binding



Immobilized human CD4 protein dimer, His-Avi Tag (Cat. No. CSP-24004-03) at 2 µg/mL (100 µL/well) can bind human gp120 protein with half maximal effective concentration (EC50) range of 6.7-26.8 ng/mL (QC tested).

Label Free Binding



Immobilized human gp120 protein can bind human CD4 protein dimer, His-Avi tag (Cat. No. CSP-24004-03) with a KD of 3-11.8 nM as determined by LSPR (Nicoya Alto).

Background

CD4 is type 1 integral membrane glycoprotein protein on T cell surface, also known as known as T-cell surface antigen T4/Leu-3. CD4 contains an extracellular domain, a transmembrane domain and a cytoplasmic domain. The extracellular domain has 4 immunoglobulin-like (Ig-like) domains: one Ig-like V-type domain and three Ig-like C2-type domains. The CD4 extracellular domain is responsible for MHC class-II antigen/T-cell receptor interaction and T cell activation. CD4 is also known as interleukin 16 receptor (IL16R). The IL16 cytokine binds CD4 to activate a downstream signalling cascade. CD4 is also the primary receptor for the human immunodeficiency virus (HIV) envelope glycoprotein gp120 to mediate HIV infection and entry into host T cells, as the underlying cause of acquired immune deficiency syndrome (AIDS).