
Product Name: Bioactive, Human CTLA-4 Protein Dimer, His Tag

Product Code: CSP-24031-01

FOR RESEARCH USE ONLY (RUO)

Protein Name: CTLA-4, Protein Dimer

Alternate Name(s): Cytotoxic T-lymphocyte associated protein 4, CTLA4, CD152, CD152 antigen, ALPS5, CD, CELIAC3, GRD4, GSE, IDDM12

Expression Host
HEK293T

Amino Acid Range
K36-D161

Protein Construct

CTLA-4 protein dimer contains a CTLA-4 extracellular domain (Uniprot# P16410) fused with a proprietary dimer motif followed by a His tag at the C-terminus. Expressed in HEK293T cell line.

SDS-Page Molecular Weight

50 kDa. The migration range of the dimer under non-reducing conditions is 50-60 kDa on SDS PAGE.

Purity

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

Shipping Conditions

Frozen Dry Ice

Formulation

0.22µm filtered PBS, pH 7.4

Stability & Storage

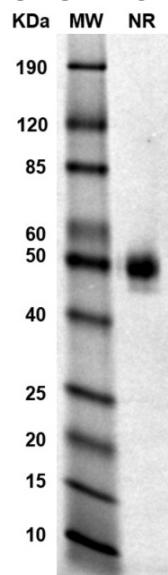
On receipt, store at -70 C or lower for long term storage.

This product is stable at:

-70 C for 6 months from date of receipt.

Avoid repeated freeze-thaw cycles

SDS-PAGE



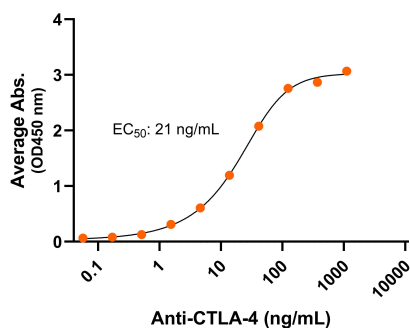
MW: Molecular Weight marker reduced condition

NR: CTLA-4 dimer under non-reducing condition

The migration range of the dimer under non-reducing conditions is 50-60 kDa on SDS PAGE.

Antibody Binding

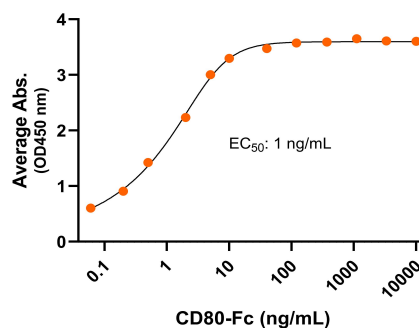
Human CTLA-4-His, ELISA
0.2 µg of CTLA-4 dimer per well



Immobilized human CTLA-4 dimer protein, His Tag (Cat. No. CSP-24031-01) at 2 µg/mL (100 µL/well) can bind anti-human CTLA-4 monoclonal antibody with half maximal effective concentration (EC50) range of 10.5-42 ng/mL (QC tested).

Ligand Binding

Human CTLA-4 / CD80-Fc, ELISA
0.2 µg of CTLA-4 dimer per well



Immobilized human CTLA-4 dimer protein, His Tag (Cat. No. CSP-24031-01) at 2 µg/mL (100 µL/well) can bind human CD80 dimer protein, with half maximal effective concentration (EC50) range of 0.5-2 ng/mL (QC tested).

Background

Cytotoxic T-lymphocyte associated protein 4 (CTLA-4), also known as CD152 (cluster of differentiation 152), CD152 antigen, CTLA4, ALPS5, CD, CELIAC3, GRD4, GSE, and IDDM12 is a member of the immunoglobulin superfamily. CTLA-4 contains an extracellular immunoglobulin-like (Ig-like) domain (an Ig-V-like and an Ig-C-like domain), a transmembrane domain, and a cytoplasmic tail. As an immune checkpoint CTLA-4 binds both CD80 (Cluster of differentiation 80) and CD86 (Cluster of differentiation 86) to transmit an inhibitory signal to T cells, competing with CD28 (Cluster of differentiation 28) which transmits a stimulatory signal. It is often overexpressed in malignancies caused by immunosurveillance, making the inhibition of immune checkpoint proteins like CTLA-4 an emerging strategy in cancer therapy. CTLA-4 gene variants have been associated with Type 1 diabetes, Graves' disease, Hashimoto's thyroiditis, celiac disease, and other autoimmune diseases.