

Synonym

CTLA4,CD152

Source

Human CTLA-4, His Tag (CT4-H52H9) is expressed from human 293 cells (HEK293). It contains AA Ala 37 - Phe 162 (Accession # [P16410-1](#)).

Predicted N-terminus: Ala 37

Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 18.8 kDa. The protein migrates as 23-30 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

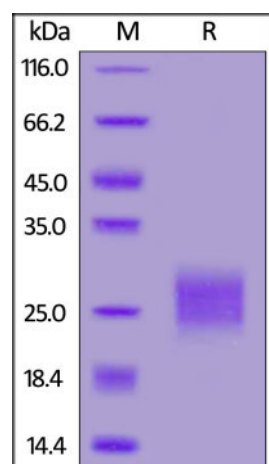
Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

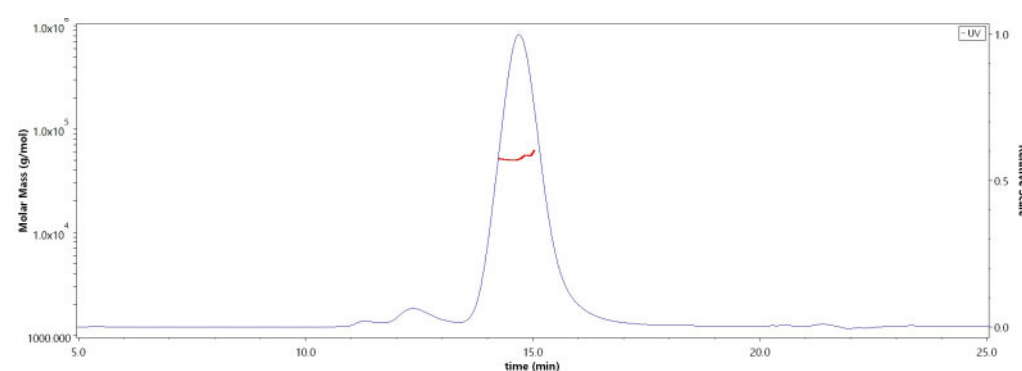
Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

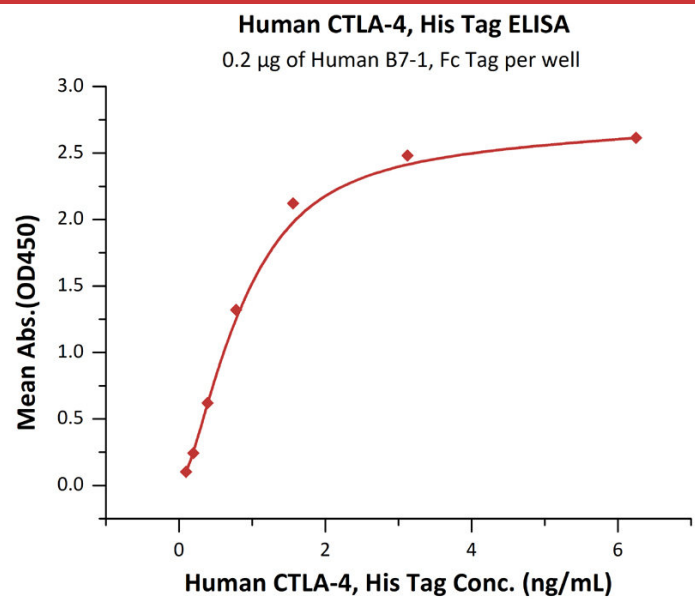
SDS-PAGE

Human CTLA-4, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

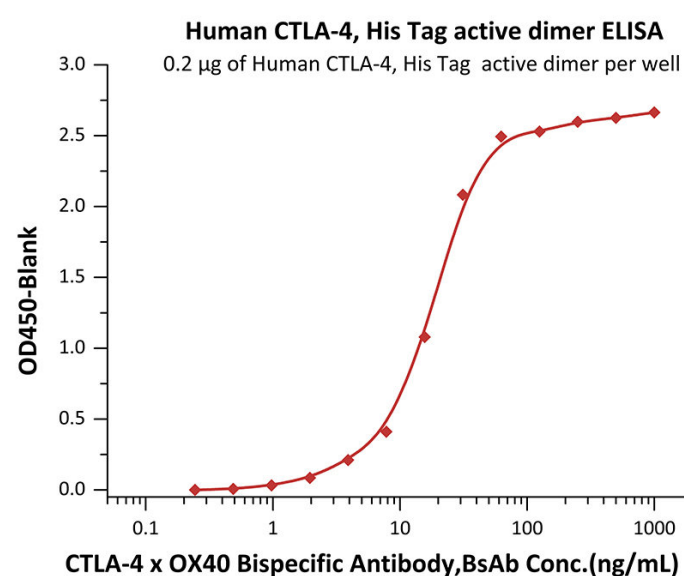
Bioactivity-ELISA**SEC-MALS**

The purity of Human CTLA-4, His Tag (Cat. No. CT4-H52H9) is more than 90% and the molecular weight of this protein is around 45-60 kDa verified by SEC-MALS.

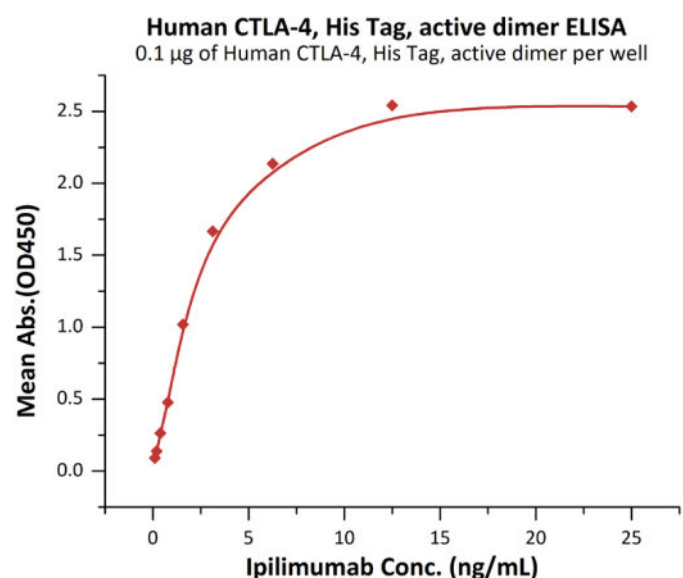
[Report](#)



Immobilized Human B7-1, Fc Tag (Cat. No. [B71-H5259](#)) at 2 µg/mL (100 µL/well) can bind Human CTLA-4, His Tag (Cat. No. [CT4-H52H9](#)) with a linear range of 0.1-2 ng/mL (QC tested).

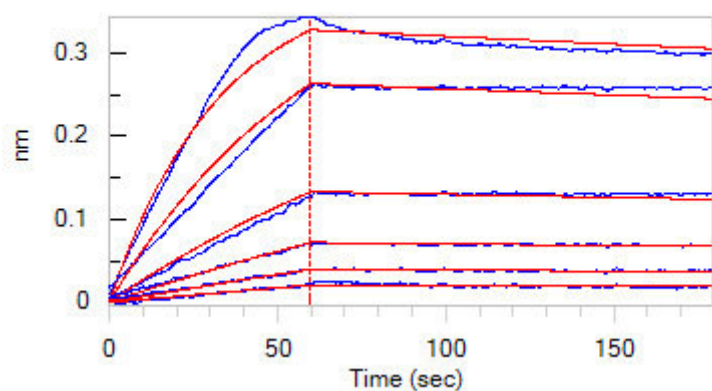


Immobilized Human CTLA-4, His Tag (Cat. No. [CT4-H52H9](#)) at 2 µg/mL, add increasing concentrations of CTLA-4 x OX40 Bispecific Antibody in 50% Human serum and then add Biotinylated Human OX40, Avitag, His Tag (Cat. No. [TN4-H82E4](#)) at 1 µg/mL. Detection was performed using HRP-conjugated streptavidin with sensitivity of 4 ng/mL (Intact assay, Routinely tested).

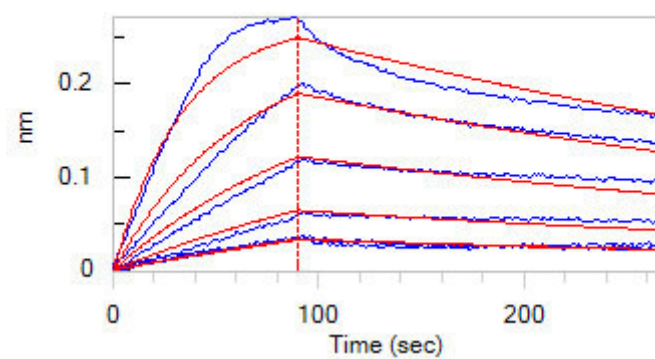


Immobilized Human CTLA-4, His Tag (Cat. No. [CT4-H52H9](#)) at 1 µg/mL (100 µL/well) can bind Ipilimumab with a linear range of 0.1-3 ng/mL (Routinely tested).

Bioactivity-BLI



Loaded Human B7-2, Fc Tag (Cat. No. [CD6-H5257](#)) on Protein A Biosensor, can bind Human CTLA-4, His Tag (Cat. No. [CT4-H52H9](#)) with an affinity constant of 1.03 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human B7-2, Fc Tag (Cat. No. [CD6-H5257](#)) on Protein A Biosensor, can bind Human CTLA-4, His Tag (Cat. No. [CT4-H52H9](#)) with an affinity constant of 1.03 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

CTLA-4 (Cytotoxic T-Lymphocyte Antigen 4) is also known as CD152 (Cluster of differentiation 152), is a protein receptor that downregulates the immune system. CTLA4 is a member of the immunoglobulin superfamily, which is expressed on the surface of Helper T cells and transmits an inhibitory signal to T cells. The protein contains an extracellular V domain, a transmembrane domain, and a cytoplasmic tail. Alternate splice variants, encoding different isoforms. CTLA4 is similar to the T-cell co-stimulatory protein, CD28, and both molecules bind to CD80 and CD86, also called B7-1 and B7-2 respectively, on antigen-presenting cells. CTLA4 transmits an inhibitory signal to T cells, whereas CD28 transmits a stimulatory signal. Intracellular CTLA4 is also found in regulatory T cells and may be important to their function. Fusion proteins of CTLA4 and antibodies (CTLA4-Ig) have been used in clinical trials for rheumatoid arthritis.

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.