

Synonym

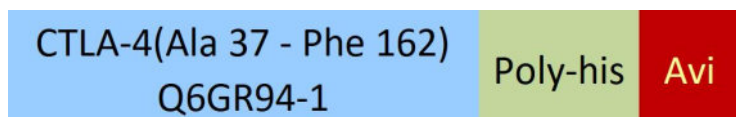
CTLA4,CD152

Source

Biotinylated Human CTLA-4, His,Avitag (CT4-H82E3) 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, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 17.2 kDa. As a result of glycosylation, the protein migrates as 22-30 kDa under reducing (R) condition, and 37-45 kDa under non-reducing (NR) condition (SDS-PAGE).

Biotinylation

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Biotin:Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% 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

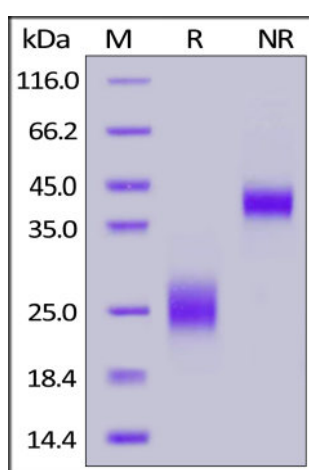
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

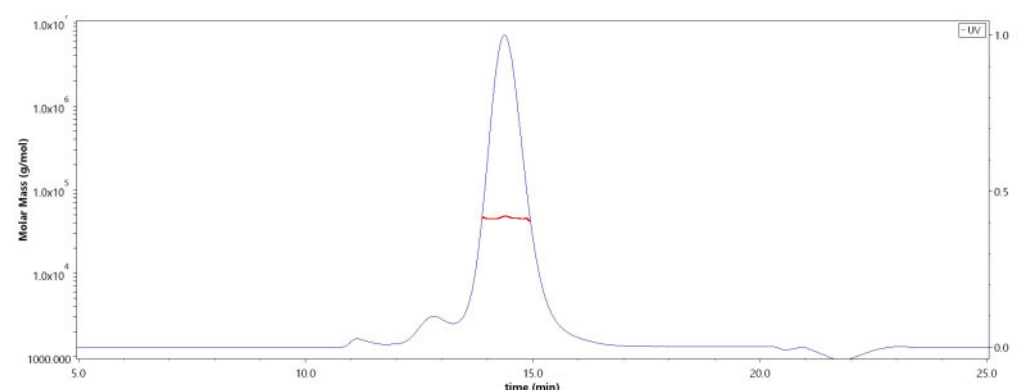
SDS-PAGE



Biotinylated Human CTLA-4, His,Avitag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

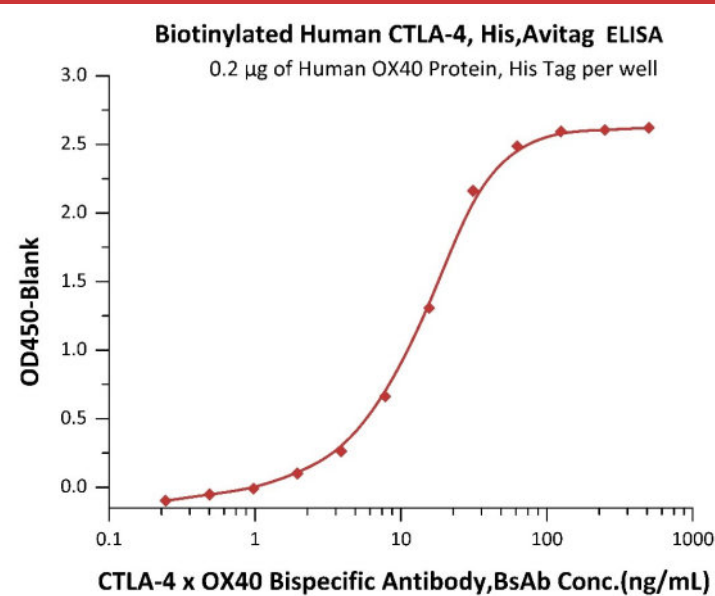
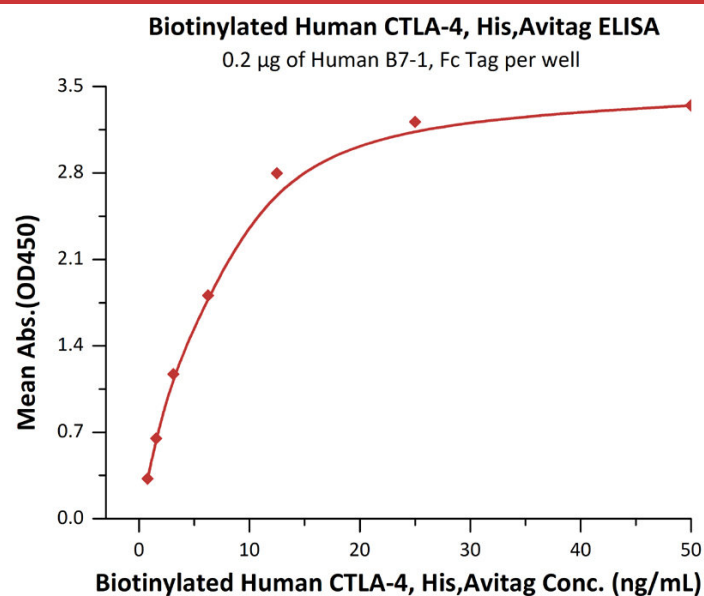
Bioactivity-ELISA

SEC-MALS



The purity of Biotinylated Human CTLA-4, His,Avitag (Cat. No. CT4-H82E3) is more than 90% and the molecular weight of this protein is around 40-60 kDa verified by SEC-MALS.

[Report](#)

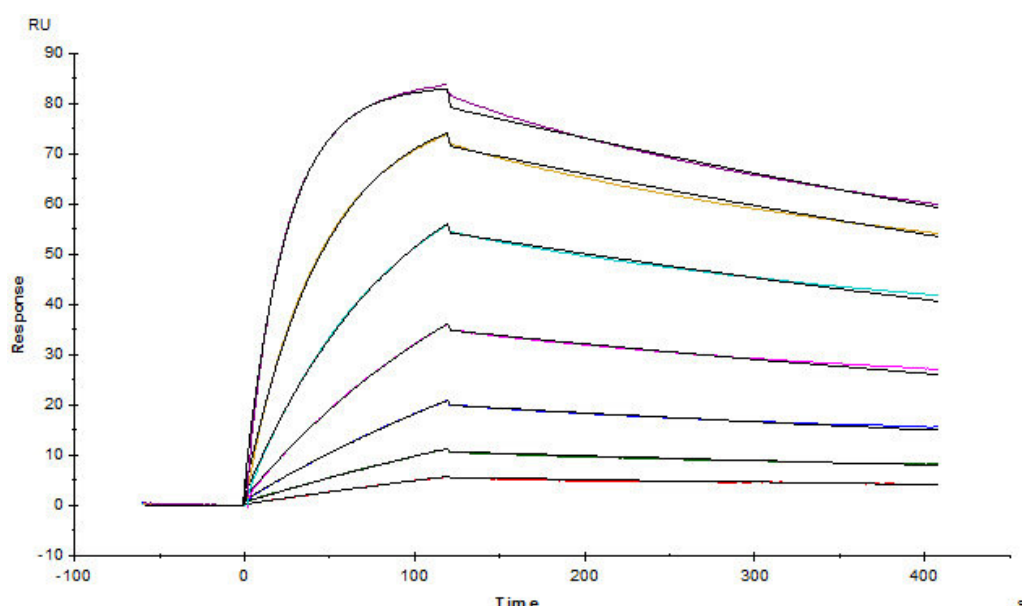


Immobilized Human B7-1, Fc Tag (Cat. No. [B71-H5259](#)) at 2 µg/mL (100 µL/well) can bind Biotinylated Human CTLA-4, His,Avitag (Cat. No. [CT4-H82E3](#)) with a linear range of 0.7-13 ng/mL (QC tested).

Quantitative Analysis of CTLA-4 x OX40 Bispecific Antibody in Human Serum by Intact Assay.

Immobilized Human OX40 Protein, His Tag (MALS verified) (Cat. No. [OX0-H5224](#)) at 2 µg/mL, add increasing concentrations of CTLA-4 x OX40 bispecific antibody in 50% Human serum and then add Biotinylated Human CTLA-4, His, Avitag (Cat. No. [CT4-H82E3](#)) at 0.2 µg/mL. Detection was performed using HRP-conjugated streptavidin with sensitivity of 4 ng/mL (Intact assay, Routinely tested).

Bioactivity-SPR



Biotinylated Human CTLA-4, His,Avitag (Cat. No. CT4-H82E3) captured on Biotin CAP - Series S sensor Chip can bind Yervoy (Ipilimumab) with an affinity constant of 0.635 nM as determined in a SPR assay (Biacore T200) (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.