Biotinylated Human 4-1BB / TNFRSF9 Protein, His,Avitag™(MALS verified)

Catalog # 41B-H82E6

Synonyms

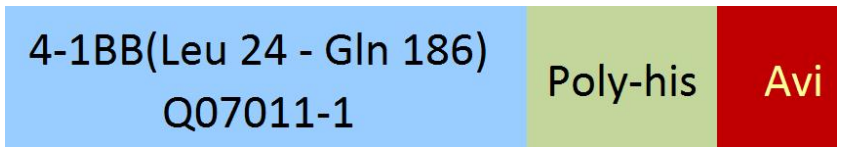
TNFRSF9, 4-1BB, CD137, CDw137, ILA

Source

Biotinylated Human 4-1BB, His,Avitag (41B-H82E6) is expressed from human 293 cells (HEK293). It contains AA Leu 24 - Gln 186 (Accession # Q07011-1).

Predicted N-terminus: Leu 24

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 20.9 kDa. The protein migrates as 30-35 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Conjugate

Biotin-labeled

Labeling

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

Protein Ratio

Passed as determined by the SABA assay / HABA assay / binding ELISA.

Purity

>90% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

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.

Shipping and Storage

This product is shipped at ambient temperature.

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

Please avoid repeated freeze-thaw cycles.

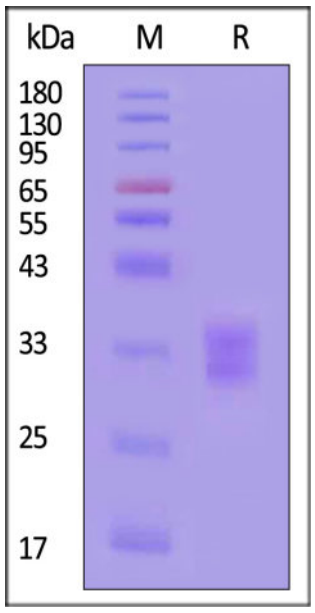
This product is stable after storage at:

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

ACRO Quality Management System

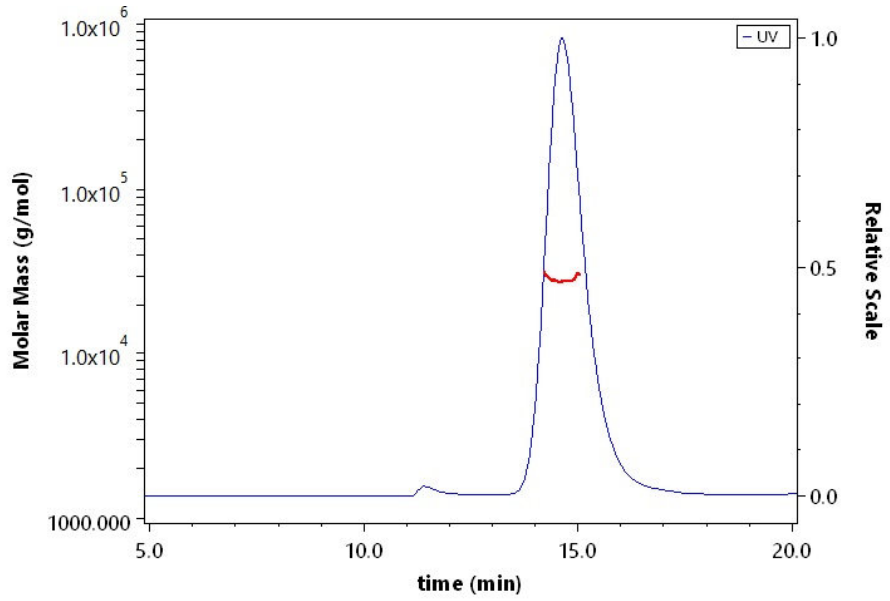
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



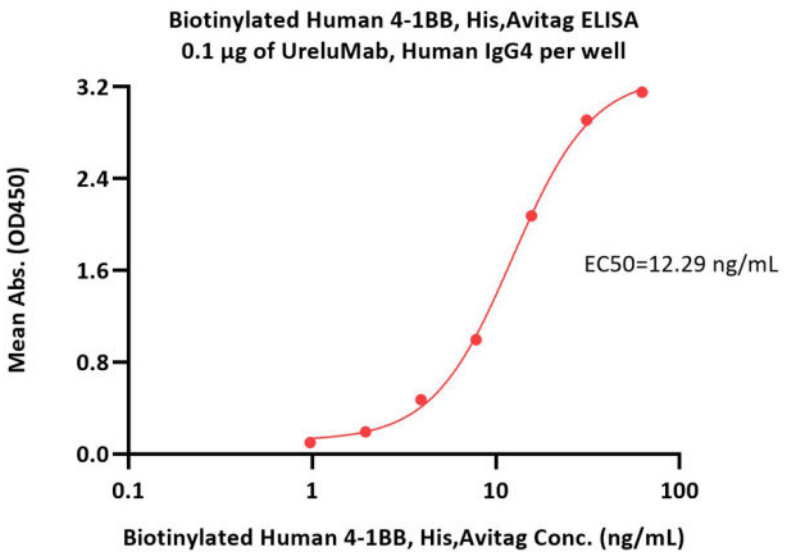
Biotinylated Human 4-1BB, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

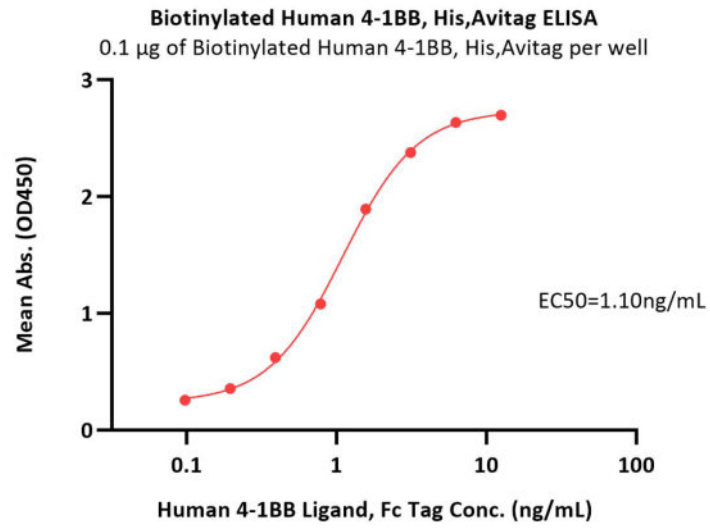


The purity of Biotinylated Human 4-1BB, His,Avitag (Cat. No. 41B-H82E6) is more than 95% and the molecular weight of this protein is around 25-35 kDa verified by SEC-MALS.

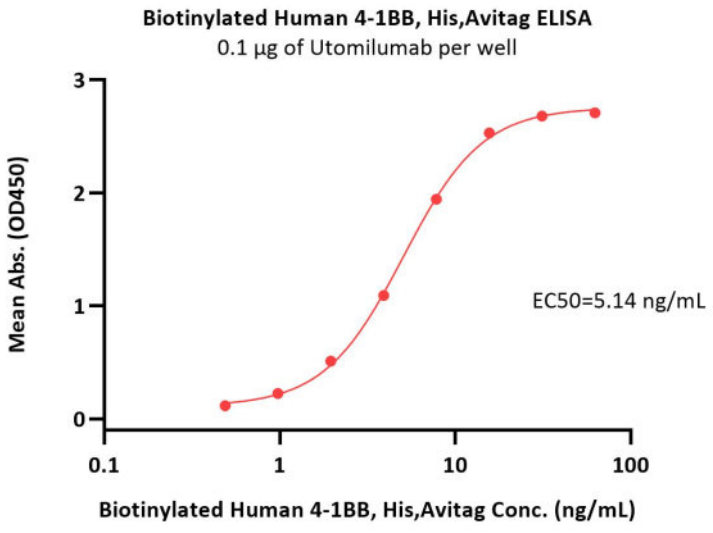
Bioactivity-ELISA



Immobilized UreluMab, Human IgG4 at 1 μg/mL (100 μL/well) can bind Biotinylated Human 4-1BB, His,Avitag (Cat. No. 41B-H82E6) with a linear range of 1-15 ng/mL (QC tested).

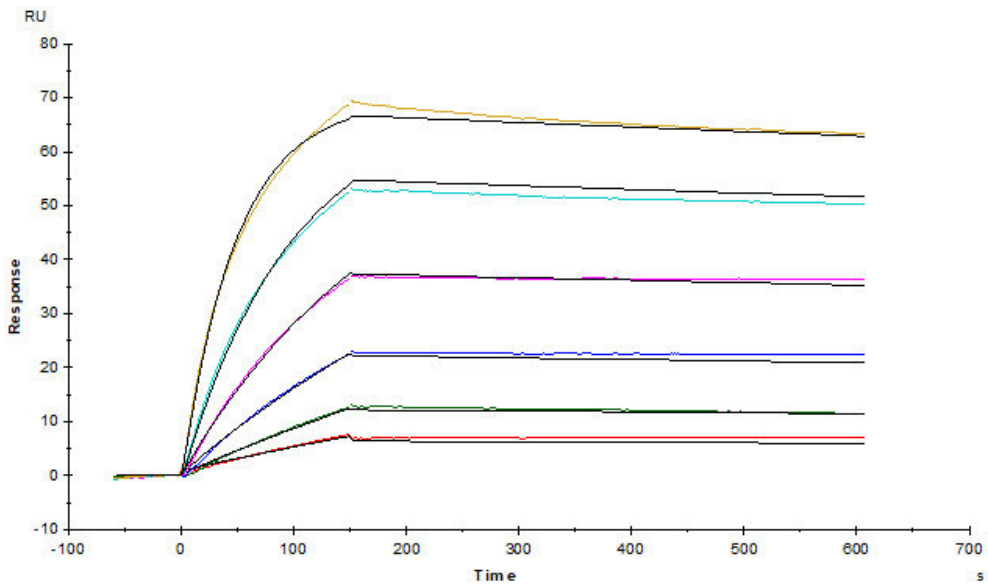


Immobilized Biotinylated Human 4-1BB, His,Avitag (Cat. No. 41B-H82E6) at 1 μg/mL (100 μL/well) on Recombinant Streptavidin (Cat. No. STN-N5116) precoated (0.5μg/well) plate can bind Human 4-1BB Ligand, Fc Tag with a linear range of 0.1-2 ng/mL (Routinely tested).



Immobilized Utomilumab at 1 μg/mL (100 μL/well) can bind Biotinylated Human 4-1BB, His,Avitag (Cat. No. 41B-H82E6) with a linear range of 0.5-8 ng/mL (Routinely tested).

Bioactivity-SPR



Biotinylated Human 4-1BB Protein, His,Avitag (Cat. No. 41B-H82E6) captured on Biotin CAP-Series S sensor Chip can bind anti 4-1BB mAb with an affinity constant of 0.158 nM as determined in a SPR assay (Biacore T200) (Routinely tested) .

Background

4-1BB is also known as CD137, tumor necrosis factor receptor superfamily member 9 (TNFRSF9), induced by lymphocyte activation (ILA), is a co-stimulatory molecule of the tumor necrosis factor (TNF) receptor superfamily. CD137 can be expressed by activated T cells, but to a larger extent on CD8 than on CD4 T cells. In addition, CD137 expression is found on dendritic cells, follicular dendritic cells, natural killer cells, granulocytes and cells of blood vessel walls at sites of inflammation. The best characterized activity of CD137 is its costimulatory activity for activated T cells. Crosslinking of CD137 enhances T cell proliferation, IL-2 secretion survival and cytolytic activity. Further, it can enhance immune activity to eliminate tumors in mice. CD137 can enhance activation-induced T cell apoptosis when triggered by engagement of the TCR/CD3 complex. In addition, 4-1BB/4-1BBL co-stimulatory pathway has been shown to augment secondary CTL responses to several viruses, and meanwhile augment anti-tumor immunity. 4-1BB thus is a promising candidate for immunotherapy of human cancer. CD137 has been shown to interact with TRAF2.

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