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

Catalog # 41B-H82F8

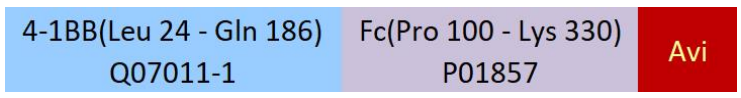
Synonym

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

Source

Biotinylated Human 4-1BB, Fc,Avitag(41B-H82F8) 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 human IgG1 Fc tag at the C-terminus, followed by an Avi tag (Avitag™)

The protein has a calculated MW of 45.4 kDa. The protein migrates as 55-60 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

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 HABA assay / binding ELISA.

Endotoxin

Less than 0.01 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 50 mM Tris, 100 mM Glycine, 25 mM Arginine, 150 mM NaCl, pH 7.5 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.

Storage

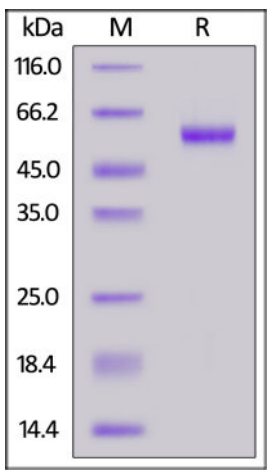
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

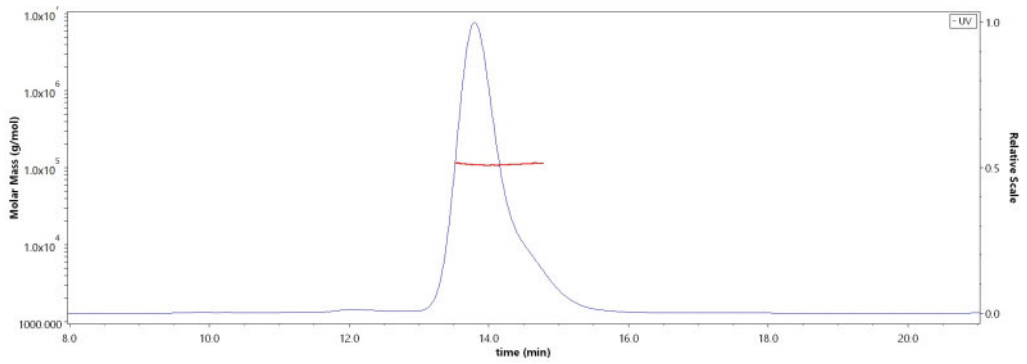
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



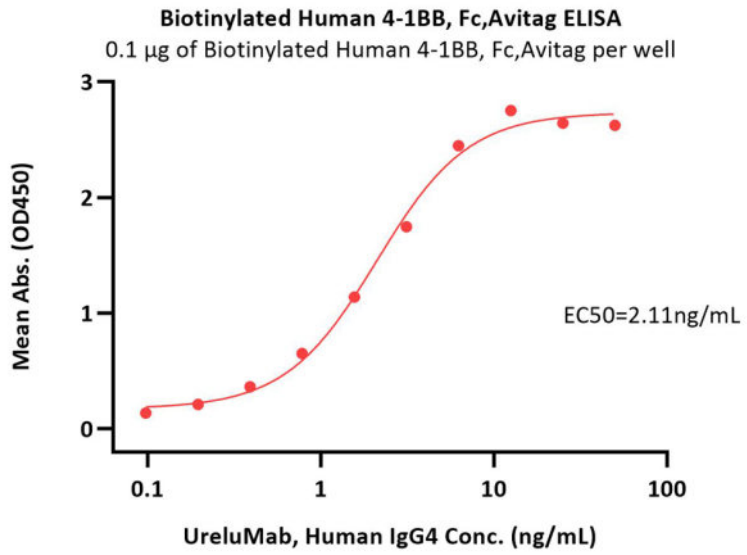
Biotinylated Human 4-1BB, Fc,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

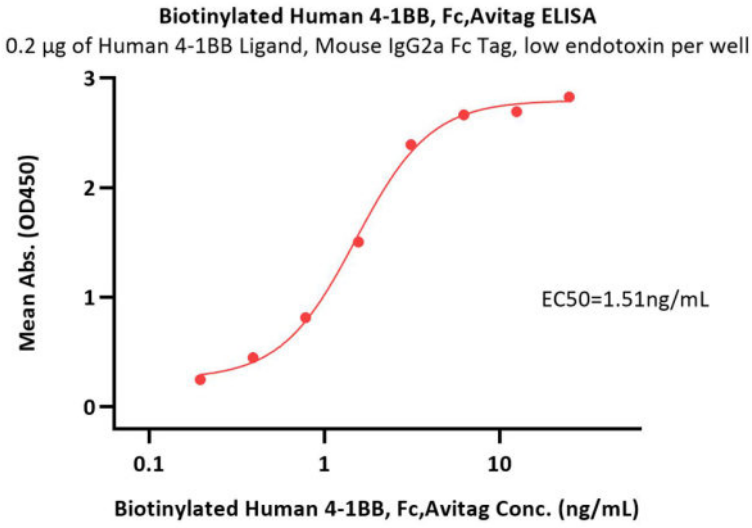


The purity of Biotinylated Human 4-1BB, Fc,Avitag (Cat. No. 41B-H82F8) is more than 90% and the molecular weight of this protein is around 98-120 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

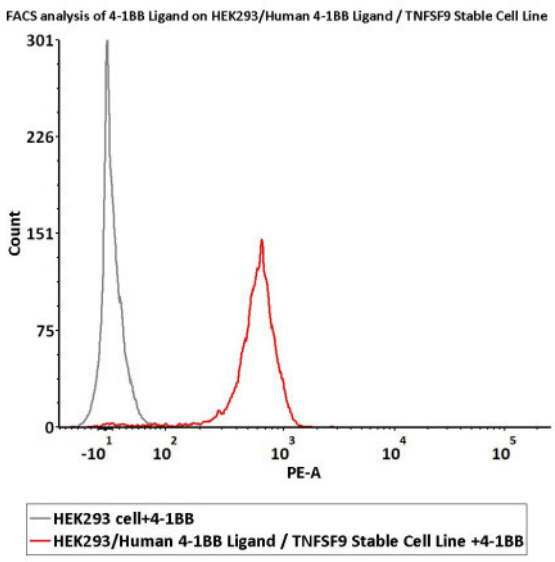


Immobilized Biotinylated Human 4-1BB, Fc,Avitag (Cat. No. 41B-H82F8) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind UreluMab, Human IgG4 with a linear range of 0.1-6 ng/mL (QC tested).



Immobilized Human 4-1BB Ligand, Mouse IgG2a Fc Tag, low endotoxin (Cat. No. 41L-H5254) at 2 μg/mL (100 μL/well) can bind Biotinylated Human 4-1BB, Fc,Avitag (Cat. No. 41B-H82F8) with a linear range of 0.2-3 ng/mL (Routinely tested).

Bioactivity-FACS



FACS assay shows that Biotinylated Human 4-1BB, Fc,Avitag (41B-H82F8) can bind to HEK293/Human 4-1BB Ligand / TNFSF9 Stable Cell Line (CHEK-ATP039). The concentration of Biotinylated Human 4-1BB, Fc,Avitag (41B-H82F8) used is 10 μg/mL (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.

Clinical and Translational Updates

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