Human 4-1BB / TNFRSF9 Protein, Fc Tag (MALS verified)

Catalog # 41B-H5258

Synonym

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

Source

Human 4-1BB, Fc Tag(41B-H5258) is expressed from human 293 cells (HEK293). It contains AA Leu 24 - Gln 186 (Accession # NP_001552.2). Predicted N-terminus: Leu 24

Molecular Characterization

4-1BB(Leu 24 - Gln 186) NP_001552.2	Fc(Pro 100 - Lys 330) P01857

This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 43.4 kDa. The protein migrates as 50-60 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in Tris with Glycine, Arginine and NaCl, pH7.5 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

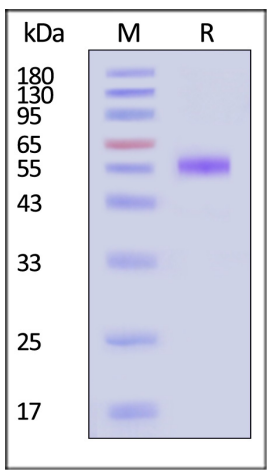
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

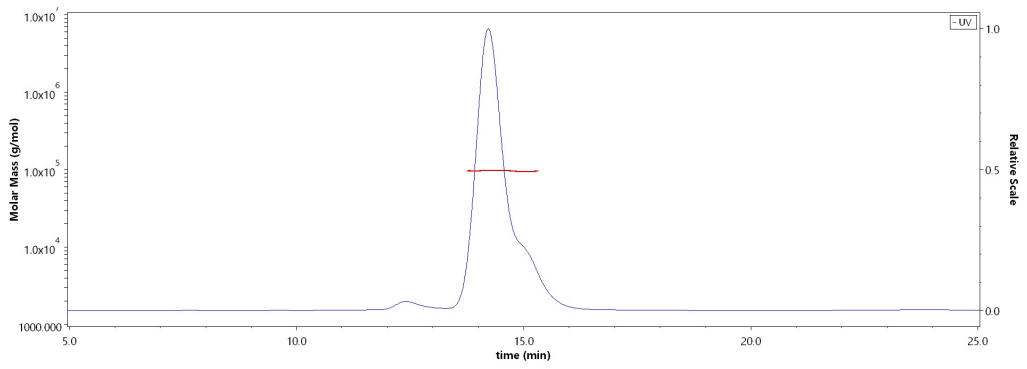
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



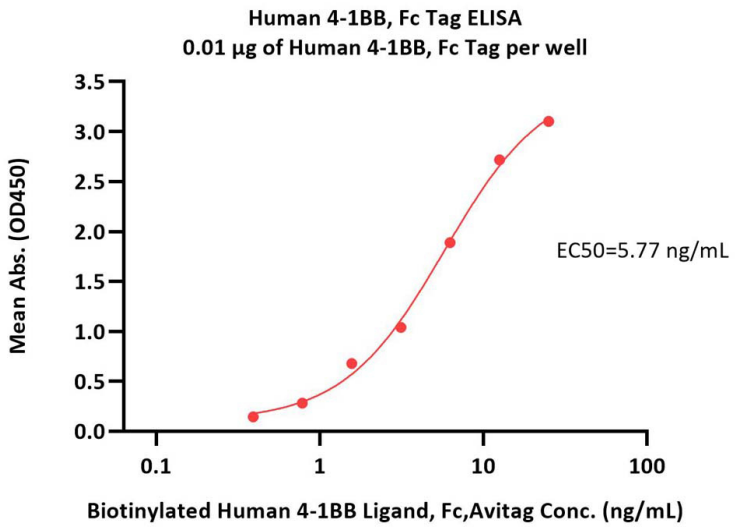
Human 4-1BB, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

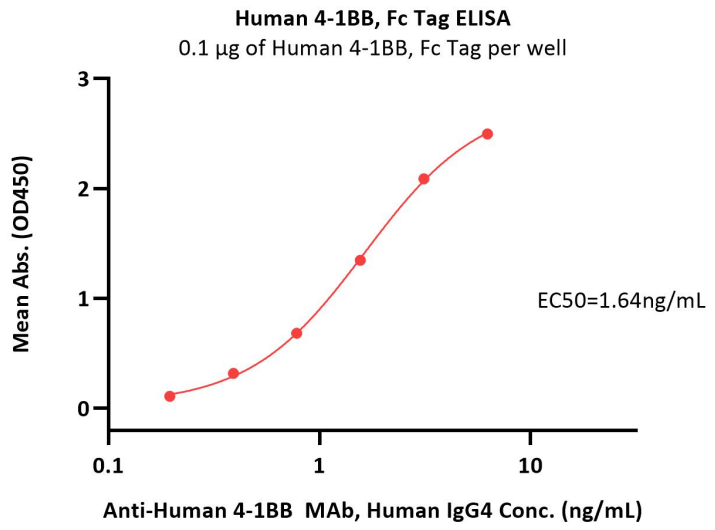


The purity of Human 4-1BB, Fc Tag (Cat. No. 41B-H5258) is more than 90% and the molecular weight of this protein is around 90-110 kDa verified by SEC-MALS.
Report

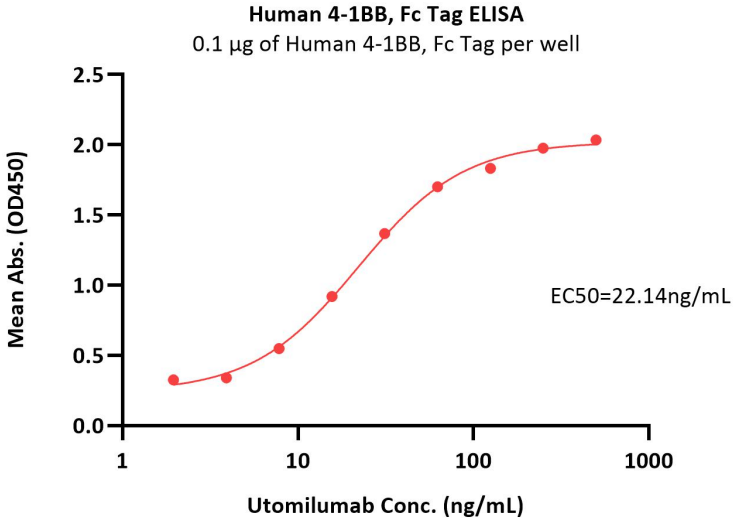
Bioactivity-ELISA



Immobilized Human 4-1BB, Fc Tag (Cat. No. 41B-H5258) at 0.1 μg/mL (100 μL/well) can bind Biotinylated Human 4-1BB Ligand, Fc,Avitag (Cat. No. 41L-H82F9) with a linear range of 0.4-6 ng/mL (QC tested).

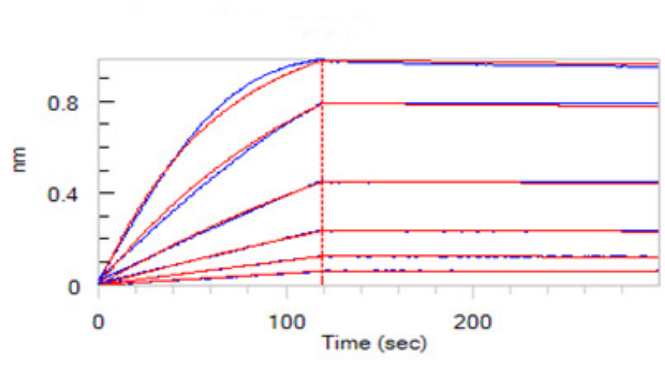


Immobilized Human 4-1BB, Fc Tag (Cat. No. 41B-H5258) at 1 μg/mL (100 μL/well) can bind Anti-Human 4-1BB MAb, Human IgG4 with a linear range of 0.2-3 ng/mL (Routinely tested).



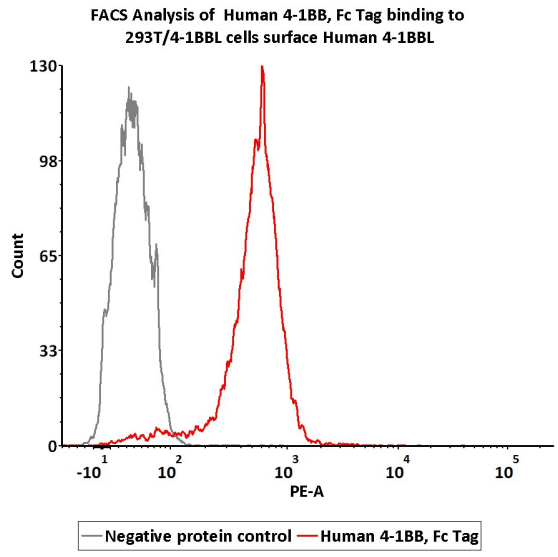
Immobilized Human 4-1BB, Fc Tag (Cat. No. 41B-H5258) at 1 μg/mL (100 μL/well) can bind Utomilumab with a linear range of 2-31 ng/mL (Routinely tested).

Bioactivity-BLI



Loaded Human 4-1BB, Fc Tag (Cat. No. 41B-H5258) on Protein A Biosensor, can bind Human 4-1BB Ligand, His Tag with an affinity constant of 1.3 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Bioactivity-FACS



Flow Cytometry assay shows that Human 4-1BB, Fc Tag (Cat. No. 41B-H5258) can bind to 293T cells overexpressing Human 4-1BBL. The concentration of 4-1BB used is 0.1 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.