Cynomolgus / Rhesus macaque 4-1BB / TNFRSF9 Protein, His Tag (MALS verified)

Catalog # 41B-C52H4

Synonym

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

Source

Cynomolgus / Rhesus macaque 4-1BB, His Tag (41B-C52H4) is expressed from human 293 cells (HEK293). It contains AA Leu 24 - Gln 186 (Accession # XP_005544945.1). In the region Leu 24 - Gln 186, the AA sequence of Cynomolgus and Rhesus macaque 4-1BB are homologus.
Predicted N-terminus: Leu 24

Molecular Characterization

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

The protein has a calculated MW of 19.2 kDa. The protein migrates as 30-40 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.

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.

Storage

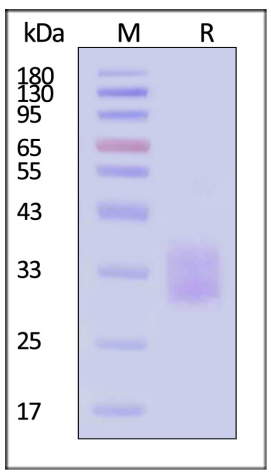
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

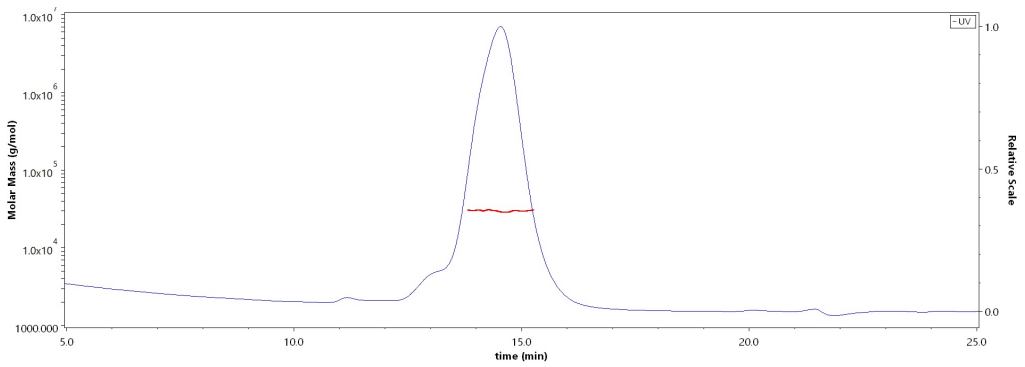
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



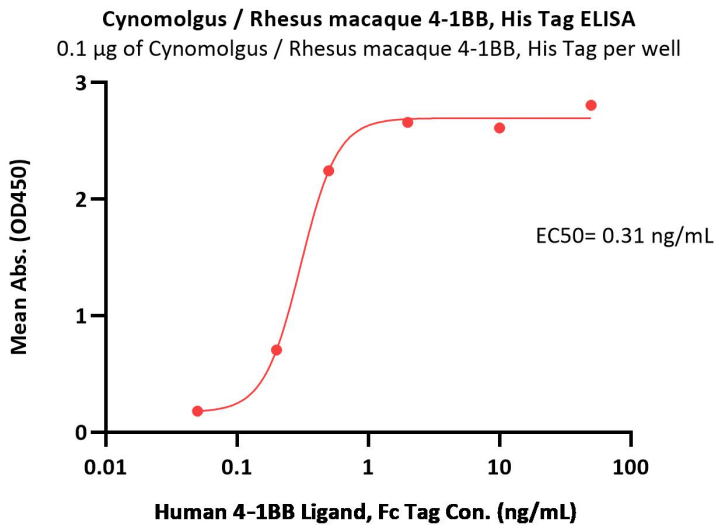
Cynomolgus / Rhesus macaque 4-1BB, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS



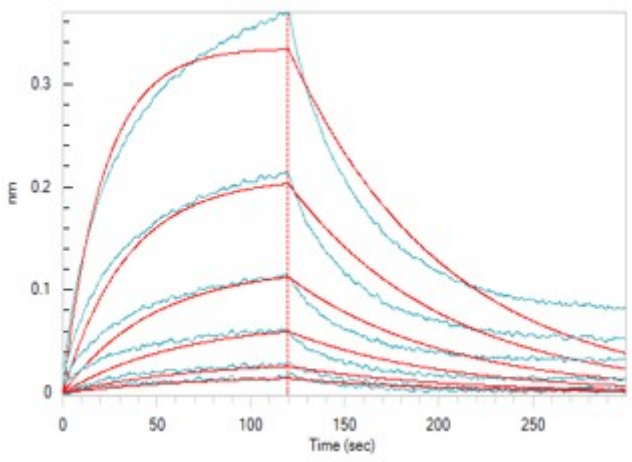
The purity of Cynomolgus / Rhesus macaque 4-1BB, His Tag (Cat. No. 41B-C52H4) is more than 85% and the molecular weight of this protein is around 25-35 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Cynomolgus / Rhesus macaque 4-1BB, His Tag (Cat. No. 41B-C52H4) at 1 μg/mL (100 μL/well) can bind Human 4-1BB Ligand, Fc Tag with a linear range of 0.05-0.5 ng/mL (QC tested).

Bioactivity-BLI



Loaded Human 4-1BB Ligand (71-254), Fc Tag (active trimer) (MALS verified) on Protein A Biosensor, can bind Cynomolgus / Rhesus macaque 4-1BB, His Tag (Cat. No. 41B-C52H4) with an affinity constant of 69.8 nM as determined in BLI assay (ForteBio Octet Red96e) (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.