Mouse B7-1 / CD80 Protein, Fc Tag (MALS verified)

Catalog # CD0-M5259

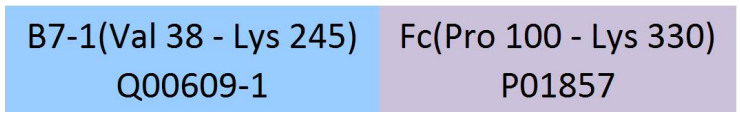
Synonym

CD80,B7,B7-1,B7.1,BB1,CD28LG,CD28LG1,LAB7

Source

Mouse B7-1, Fc Tag(CD0-M5259) is expressed from human 293 cells (HEK293). It contains AA Val 38 - Lys 245 (Accession # Q00609-1).
Predicted N-terminus: Val 38

Molecular Characterization



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

The protein has a calculated MW of 50.3 kDa. The protein migrates as 66-90 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

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
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

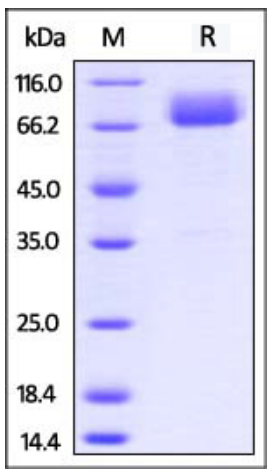
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

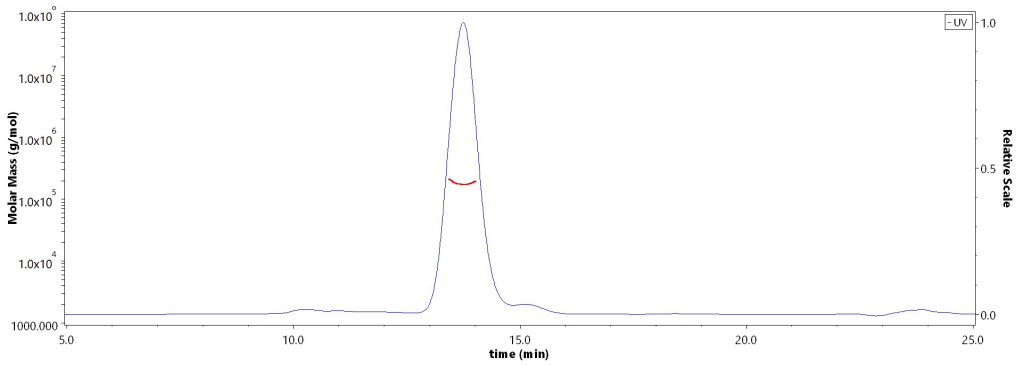
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



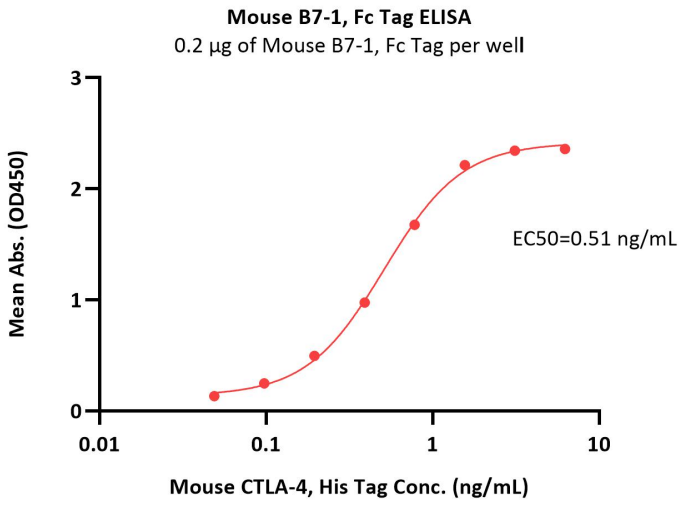
Mouse B7-1, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

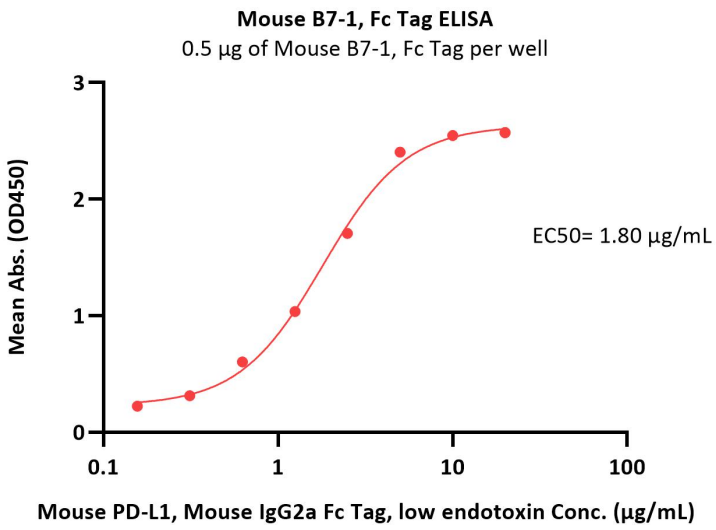


The purity of Mouse B7-1, Fc Tag (Cat. No. CD0-M5259) is more than 90% and the molecular weight of this protein is around 115-145 kDa verified by SEC-MALS.
Report

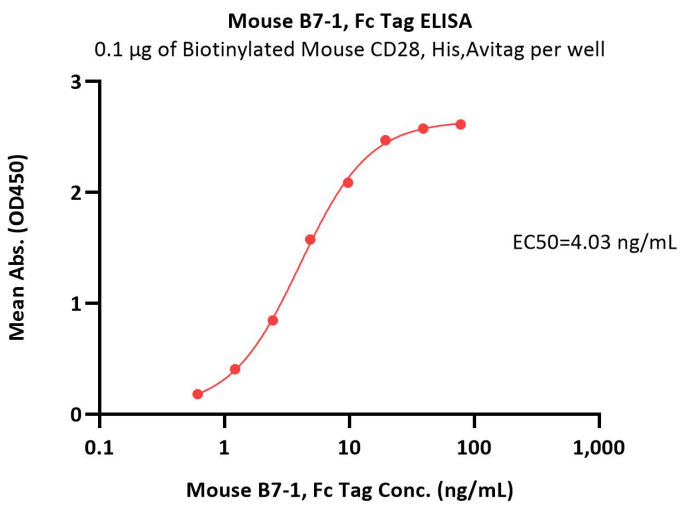
Bioactivity-ELISA



Immobilized Mouse B7-1, Fc Tag (Cat. No. CD0-M5259) at 2 μg/mL (100 μL/well) can bind Mouse CTLA-4, His Tag (Cat. No. CT4-M52H5) with a linear range of 0.05-0.8 ng/mL (QC tested).

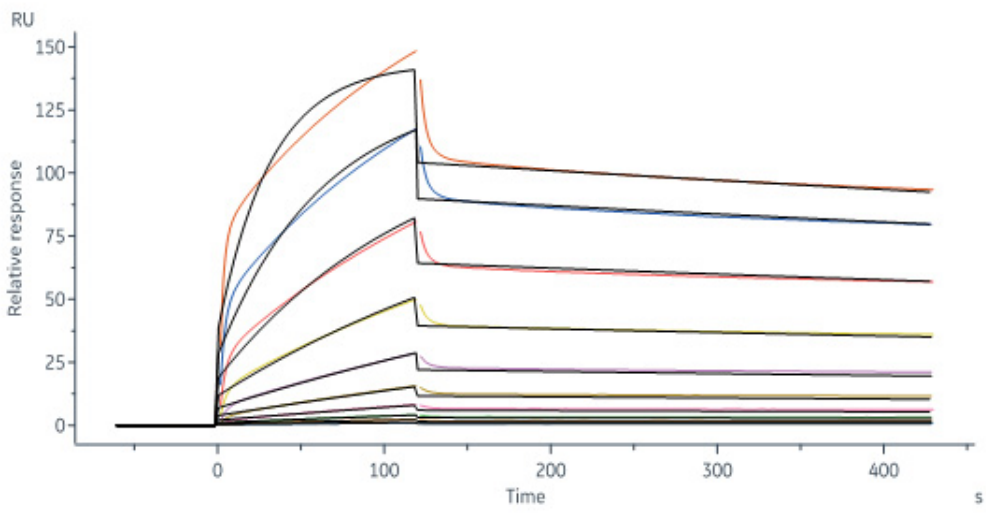


Immobilized Mouse B7-1, Fc Tag (Cat. No. CD0-M5259) at 5 μg/mL (100 μL/well) can bind Mouse PD-L1, mouse IgG2a Fc tag, low endotoxin (Cat. No. PD1-M52A2) with a linear range of 0.16-2.5 μg/mL (Routinely tested).



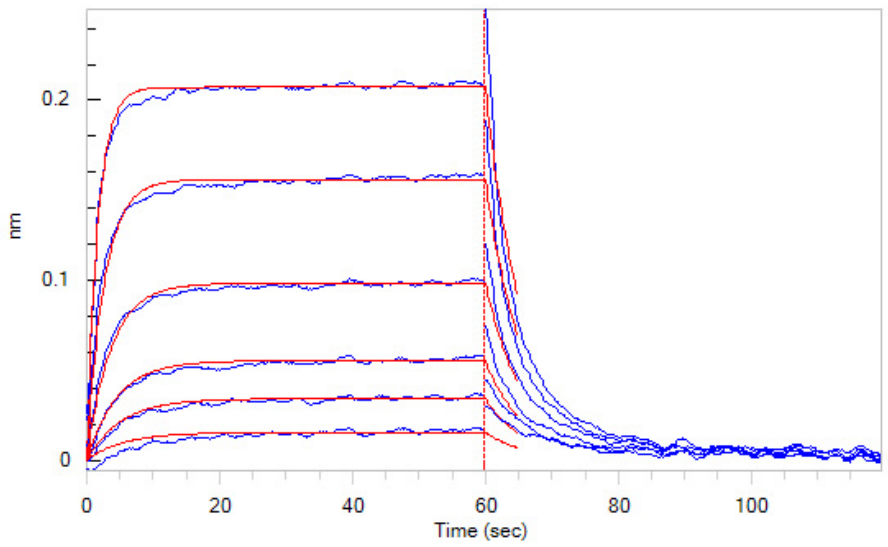
Immobilized Biotinylated Mouse CD28, His,Avitag (Cat. No. CD8-M82E3) at 1 μg/mL (100 μL/well) on Streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate, can bind Mouse B7-1, Fc Tag (Cat. No. CD0-M5259) with a linear range of 0.6-10 ng/mL (Routinely tested).

Bioactivity-SPR



Mouse B7-1, Fc Tag (Cat. No. CD0-M5259) captured on CM5 chip via anti-human IgG Fc antibody can bind Mouse CD28, His Tag (Cat. No. CD8-M52H6) with an affinity constant of 49.6 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Bioactivity-BLI



Loaded Mouse B7-1, Fc Tag (Cat. No. CD0-M5259) on Protein A Biosensor, can bind Mouse CD28, His Tag (Cat. No. CD8-M52H6) with an affinity constant of 4.7 μM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

B7-1 and B7-2, together with their receptors CD28 and CTLA4, constitute one of the dominant co-stimulatory pathways that regulate T and Bcell responses. Although both CTLA4 and CD28 can bind to the same ligands, CTLA4 binds to B71 and B72 with a 20 100 fold higher affinity than CD28 and is involved in the downregulation of the immune response.
B-lymphocyte activation antigen B7-1 (referred to as B7) also known as cluster of Differentiation 80 (CD80), is a member of cell surface immunoglobulin superfamily and is expressed on activated B cells, activated T cells, macrophages and dendritic cells. It is the ligand for two different proteins on the T cell surface: CD28 (for autoregulation and intercellular association) and CTLA-4 (for attenuation of regulation and cellular disassociation). CD80 works in tandem with CD86 to prime T cells. CD80 plays a role in induction of innate immune responses by activating NF-κB-signaling pathway in macrophages. CD80 is thus regarded as promising therapeutic targets for autoimmune diseases and various carcinomas.

Clinical and Translational Updates