

Synonym

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

Source

Rat B7-1, His Tag(B71-R52H9) is expressed from human 293 cells (HEK293). It contains AA Ile 39 - Gln 248 (Accession # [Q62680-1](#)).

Predicted N-terminus: Ile 39

Molecular Characterization

B7-1(Ile 39 - Gln 248)
Q62680-1 Poly-his

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

The protein has a calculated MW of 25.8 kDa. The protein migrates as 35-45 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL 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.

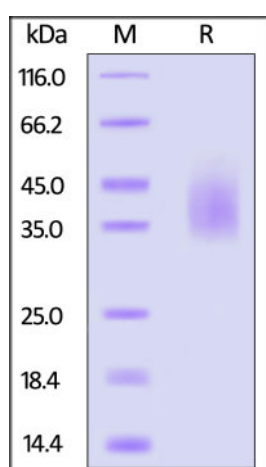
Storage

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

Please avoid repeated freeze-thaw cycles.

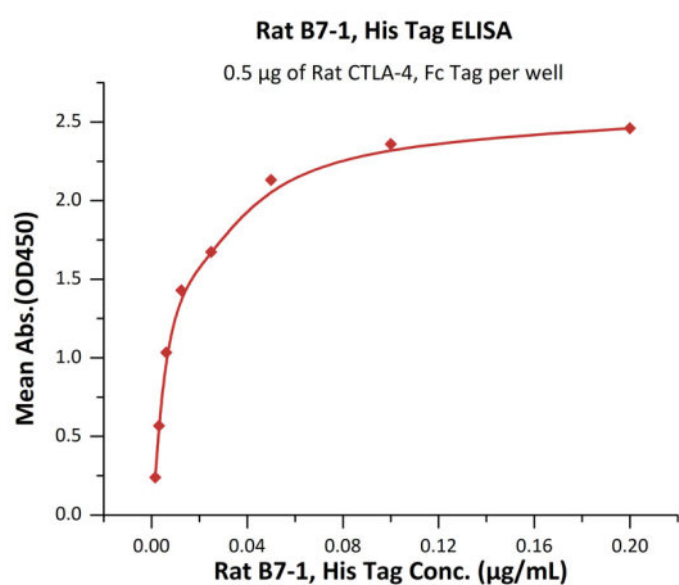
This product is stable after storage at:

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

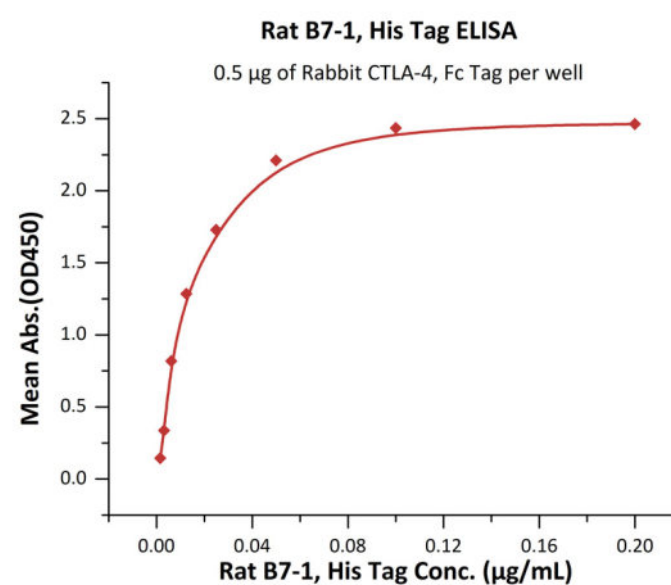
SDS-PAGE

Rat B7-1, 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%.

Bioactivity-ELISA



Immobilized Rat CTLA-4, Fc Tag (Cat. No. CT4-R5259) at 5 µg/mL (100 µL/well) can bind Rat B7-1, His Tag (Cat. No. B71-R52H9) with a linear range of 0.002-0.05 µg/mL (QC tested).



Immobilized Rabbit CTLA-4, Fc Tag (Cat. No. CT4-R5250) at 5 µg/mL (100 µL/well) can bind Rat B7-1, His Tag (Cat. No. B71-R52H9) with a linear range of 0.002-0.05 µg/mL (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 B cell 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

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