

**Synonym**

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

Source

Biotinylated Human B7-1 Protein, Avitag, His Tag (B71-H82E9) is expressed from human 293 cells (HEK293). It contains AA Val 35 - Asn 242 (Accession # [P33681-1](#)).

Predicted N-terminus: Val 35

Molecular Characterization

B7-1(Val 35 - Asn 242)
P33681-1

Avi Poly-his

This protein carries an Avi tag (Avitag™) at the C-terminus, followed by a polyhistidine tag.

The protein has a calculated MW of 26.5 kDa. The protein migrates as 44-54 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.

Application

B71-H82E9 works best for experiments that test the binding between B7-1 and candidate antibodies, such as biopanning and other relevant assays.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% 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.

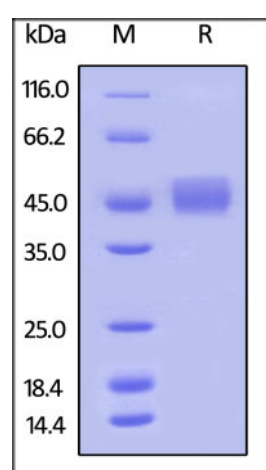
Storage

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:

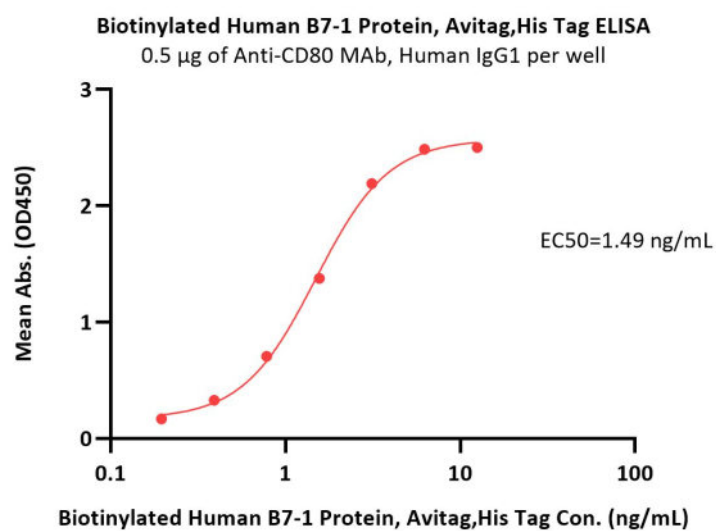
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

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

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**Bioactivity-ELISA**

Immobilized Anti-CD80 MAb, Human IgG1 at 5 µg/mL (100 µL/well) can bind Biotinylated Human B7-1 Protein, Avitag, His Tag (Cat. No. B71-H82E9) with a linear range of 0.1-3 ng/mL (QC 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

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