



## 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.

## Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## 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

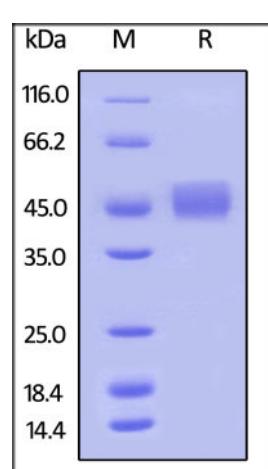
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

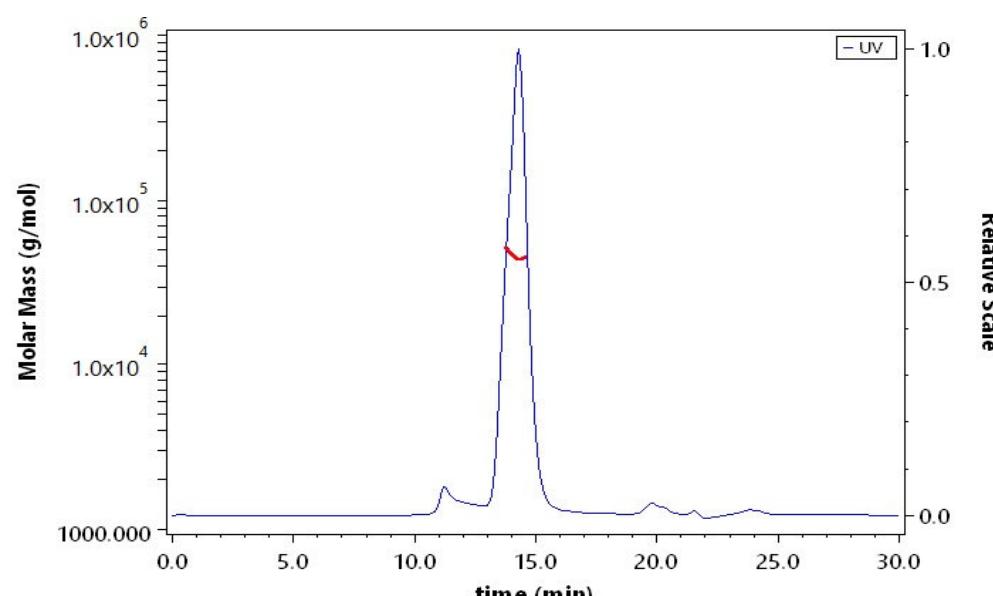
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## 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%.

## SEC-MALS



The purity of Biotinylated Human B7-1 Protein, Avitag,His Tag (Cat. No. B71-H82E9) is more than 90% and the molecular weight of this protein is around 35-55 kDa verified by SEC-MALS.

[Report](#)

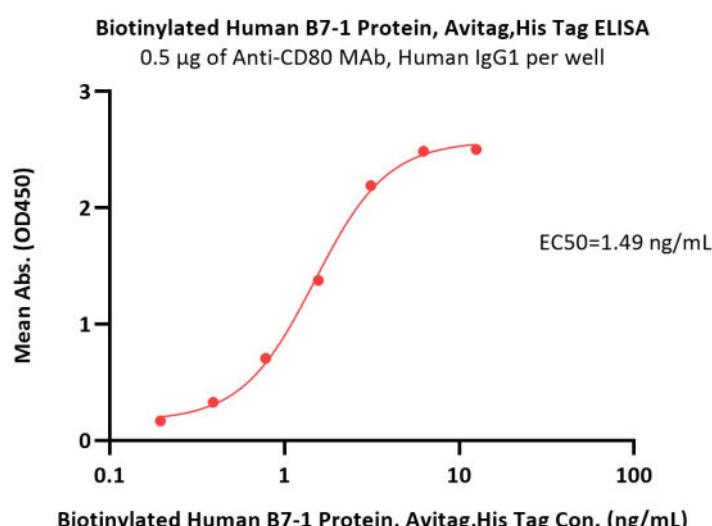
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## Bioactivity-ELISA



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 B7-1 and B7-2 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.

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