



## Synonym

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

## Source

Human B7-1, Fc Tag (B71-H5259) is expressed from human 293 cells (HEK293). It contains AA Val 35 - Asn 242 (Accession # [NP\\_005182.1](#)).

Predicted N-terminus: Val 35

## Molecular Characterization

B7-1(Val 35 - Asn 242)  
NP\_005182.1

Fc(Pro 100 - Lys 330)  
P01857

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

The protein has a calculated MW of 50.0 kDa. The protein migrates as 65-90 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per  $\mu$ g by the LAL method / rFC method.

## Purity

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in 50 mM Tris, 100 mM Glycine, 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

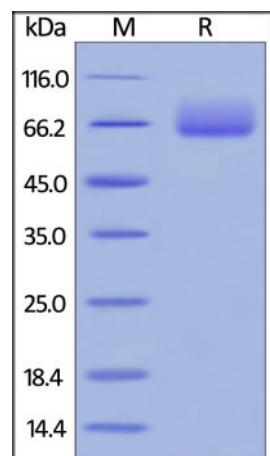
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

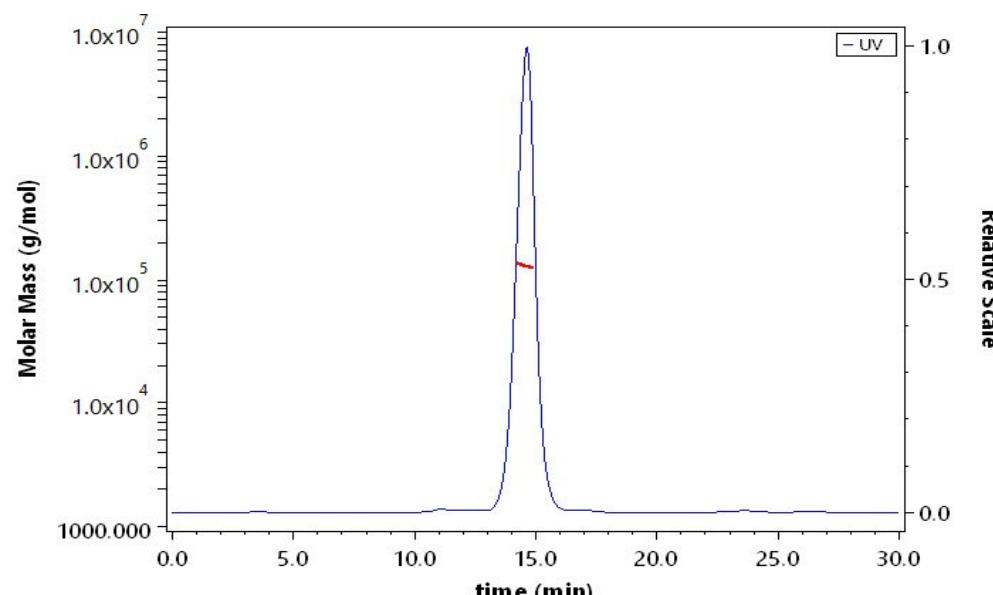
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



Human 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 Human B7-1, Fc Tag (Cat. No. B71-H5259) is more than 95% and the molecular weight of this protein is around 125-135 kDa verified by SEC-MALS.

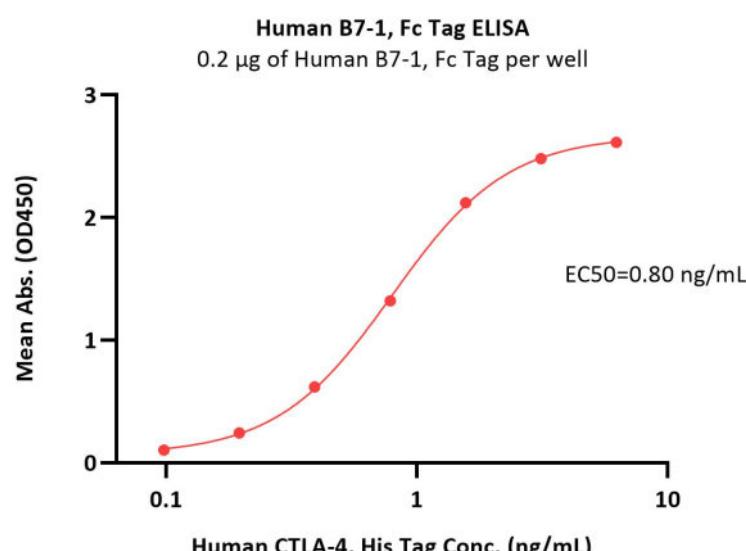
[Report](#)

## Bioactivity-ELISA

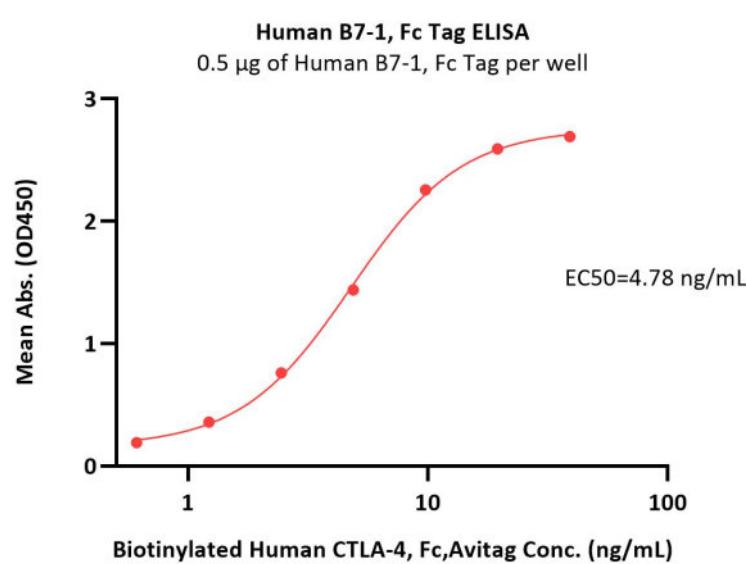
Discounts, Gifts,  
and more!



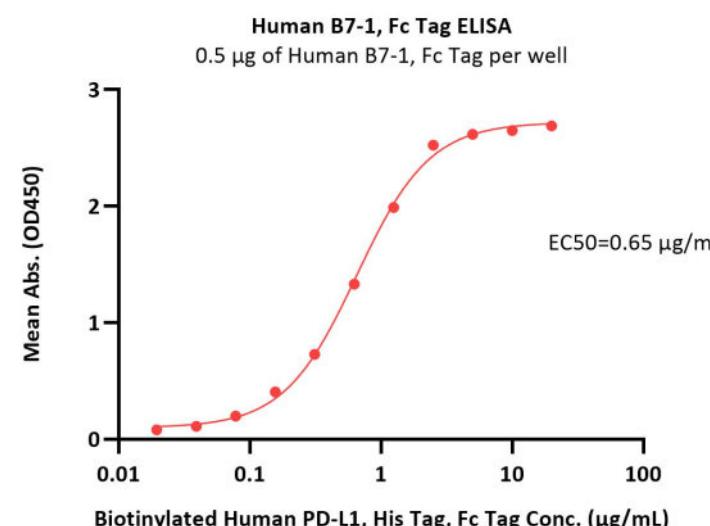
» [www.acrobiosystems.com](http://www.acrobiosystems.com)



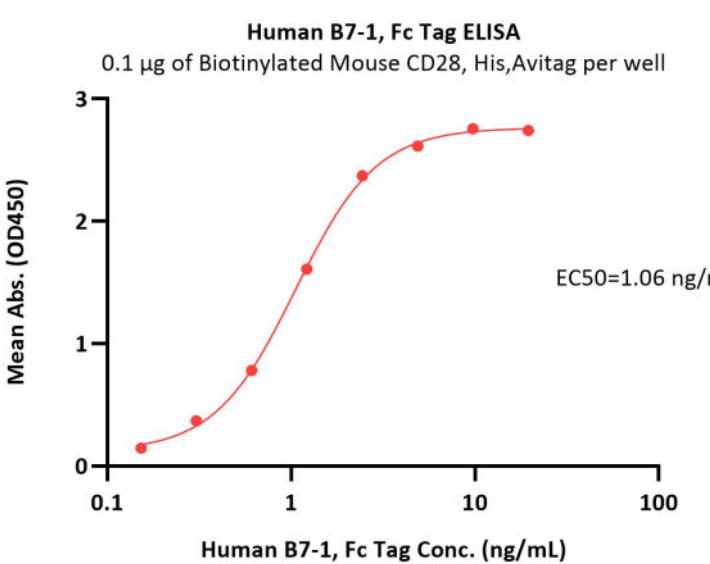
Immobilized Human B7-1, Fc Tag (Cat. No. B71-H5259) at 2 µg/mL (100 µL/well) can bind Human CTLA-4, His Tag (Cat. No. CT4-H52H9) with a linear range of 0.1-2 ng/mL (QC tested).



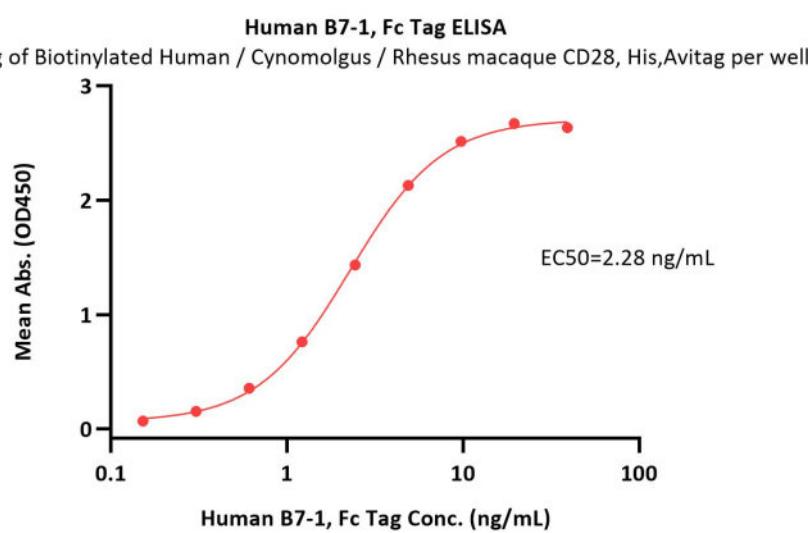
Immobilized Human B7-1, Fc Tag (Cat. No. B71-H5259) at 5 µg/mL (100 µL/well) can bind Biotinylated Human CTLA-4, Fc,Avitag (Cat. No. CT4-H82F3) with a linear range of 0.6-10 ng/mL (Routinely tested).



Immobilized Human B7-1, Fc Tag (Cat. No. B71-H5259) at 5 µg/mL (100 µL/well) can bind Biotinylated Human PD-L1, Fc,Avitag,His Tag (Cat. No. PD1-H82F3) with a linear range of 0.02-1.25 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 Human B7-1, Fc Tag (Cat. No. B71-H5259) with a linear range of 0.2-2 ng/mL (Routinely tested).

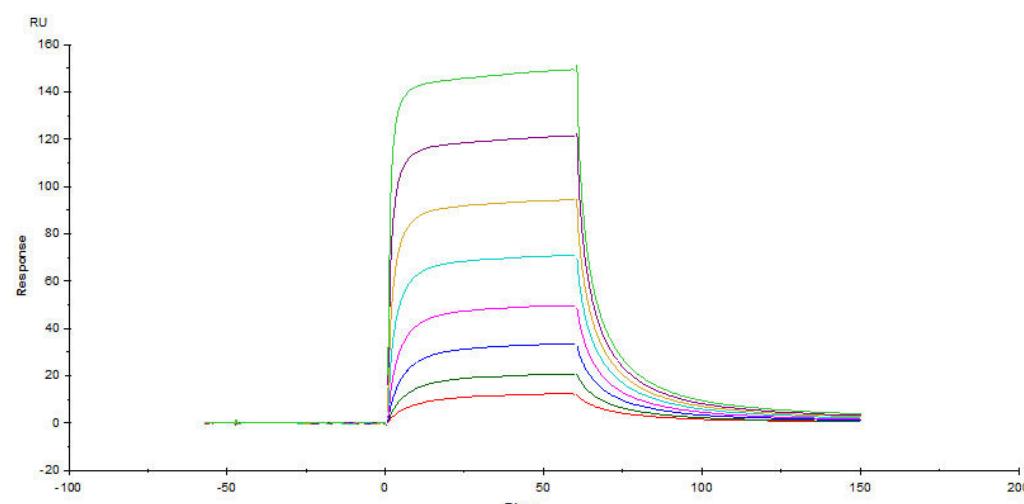


Immobilized Biotinylated Human / Cynomolgus / Rhesus macaque CD28, His,Avitag (Cat. No. CD8-H82E5) at 1 µg/mL (100 µL/well) on Streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate, can bind Human B7-1, Fc Tag (Cat. No. B71-H5259) with a linear range of 0.2-5 ng/mL (Routinely tested).

Discounts, Gifts,  
and more!

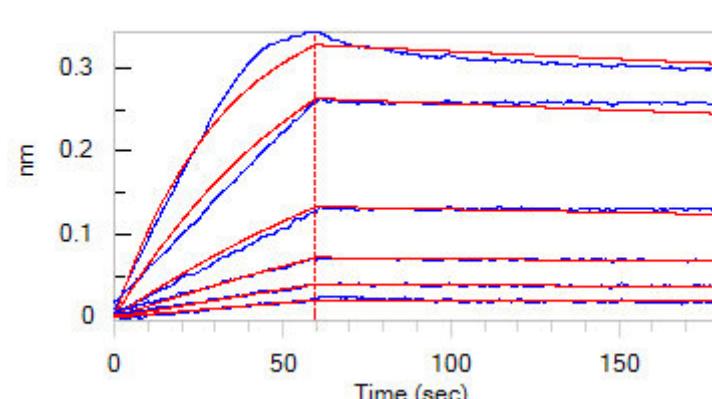


### Bioactivity-SPR

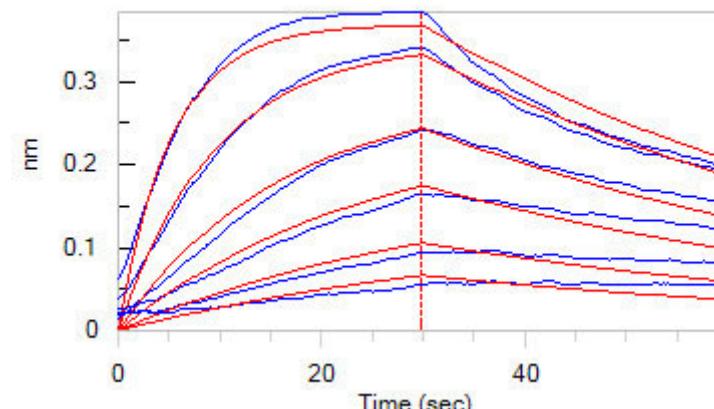


Immobilized Human / Cynomolgus / Rhesus macaque CD28, Fc Tag (Cat. No. CD8-H525a) on CM5 Chip can bind Human B7-1, Fc Tag (Cat. No. B71-H5259) with an affinity constant of 2.01  $\mu$ M as determined in a SPR assay (Biacore T200) (Routinely tested).

### Bioactivity-BLI

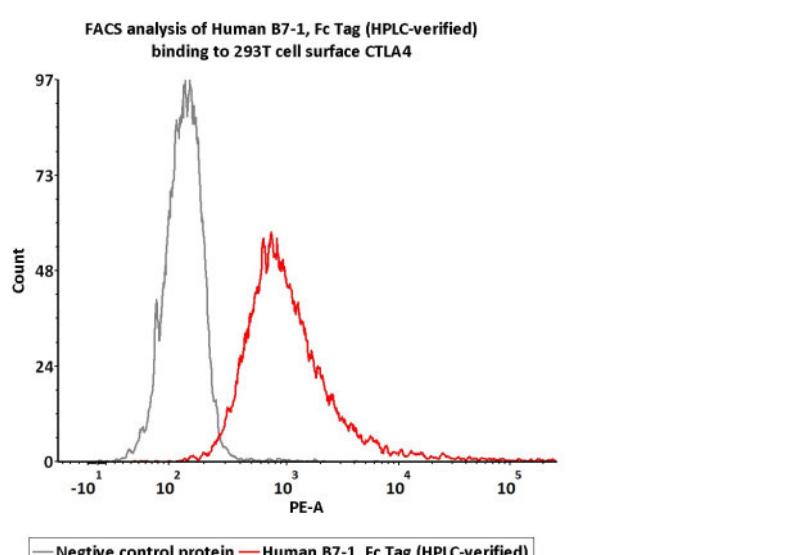


Loaded Human B7-1, Fc Tag (Cat. No. B71-H5259) on Protein A Biosensor, can bind Human / Cynomolgus / Rhesus macaque CD28, His Tag with an affinity constant of 5.1  $\mu$ M as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human B7-1, Fc Tag (Cat. No. B71-H5259) on Protein A Biosensor, can bind Human CTLA-4, His Tag, active dimer (Cat. No. CT4-H52H9) with an affinity constant of 0.498 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

### Bioactivity-FACS



FACS assay shows that Human B7-1, Fc Tag (Cat. No. B71-H5259) can bind to 293T cells overexpressing human CTLA4 protein. The concentration of

Discounts, Gifts,  
and more!





Human B7-1 is 1 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 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.

**Discounts, Gifts,  
and more!**



» [www.acrobiosystems.com](http://www.acrobiosystems.com)