

Recombinant human CD80 protein (Active) ab173993

8 Images

Description

Product name	Recombinant human CD80 protein (Active)
Biological activity	<p>Measured by its binding ability in a functional ELISA. Immobilized ab173993 at 5 µg/mL (100 µL/well) can bind Biotinylated Human PD-L1, His Tag, Fc Tag (ab246118) with a linear range of 0.02-1.25 µg/mL.</p> <p>Measured by its binding ability in a functional ELISA. Immobilized ab173993 at 2 µg/mL (100 µL/well) can bind Recombinant human CTLA4 protein (ab167727) with a linear range of 0.5-4 ng/mL.</p> <p>Measured by its binding ability in a functional ELISA. Immobilized ab173993 at 5 µg/mL (100 µL/well) can bind Recombinant Human CTLA4 (biotinylated) protein (ab207136) with a linear range of 0.6-10 ng/mL.</p> <p>Measured by its binding ability in a functional ELISA. Immobilized Biotinylated Mouse CD28, His, Avitag at 1 µg/mL (100 µL/well) on streptavidin precoated (0.5 µg/well) plate, can bind ab173993 with a linear range of 0.2-2 ng/mL.</p> <p>Measured by its binding ability in a SPR assay. Immobilized Human CD28, on CM5 Chip can bind ab173993 with an affinity constant of 2.01 µM.</p> <p>Measured by its binding ability in a functional ELISA. Immobilized ab173993 at 2 µg/mL (100 µL/well) can bind Human CTLA-4, His Tag with a linear range of 0.1-2 ng/mL (QC tested).</p>
Purity	> 95 % SDS-PAGE.
Endotoxin level	< 1.000 Eu/µg
Expression system	HEK 293 cells
Accession	<u>P33681</u>
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	<p>VIHVTKEVKEVATLSCGHNVSEELAQTRMWQKEKKMVL</p> <p>TMMSGDMNIW</p> <p>PEYKNRTIFDITNNLSMILALRPSDEGTYECVVLKYEKDAFK</p> <p>REHLAEV TLSVKADFPTPSISDFEIPT</p> <p>SNIRRIICSTSGGFPEPHLSWLENGEEL</p> <p>NAINTTVSQDPETEL YAVSSKLDFNMTTNHSF</p>

Predicted molecular weight	50 kDa including tags
Molecular weight information	The protein migrates as 65-90 kDa under reducing condition due to glycosylation.
Amino acids	35 to 242
Tags	Fc tag C-Terminus
Additional sequence information	(NP_005182.1) ab173993 is fused with Fc fragment of Human IgG1 at the C terminus.

Specifications

Our **Abpromise guarantee** covers the use of **ab173993** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	ELISA HPLC Functional Studies SDS-PAGE
Form	Lyophilized
Additional notes	<p>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.</p> <p>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.</p>

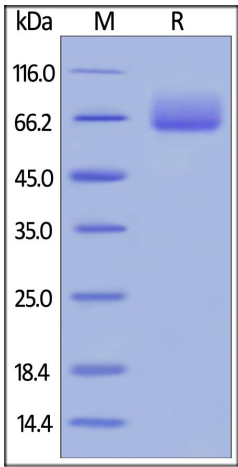
Preparation and Storage

Stability and Storage	<p>Shipped at 4°C. Upon delivery aliquot. Store at -20°C or -80°C. Please see notes section.</p> <p>pH: 7.4</p> <p>Constituents: 0.61% Tris, 0.75% Glycine, 10% Trehalose</p> <p>This product is an active protein and may elicit a biological response in vivo, handle with caution.</p>
Reconstitution	Reconstitute with sterile deionized water to a concentration of 400 µg/ml.

General Info

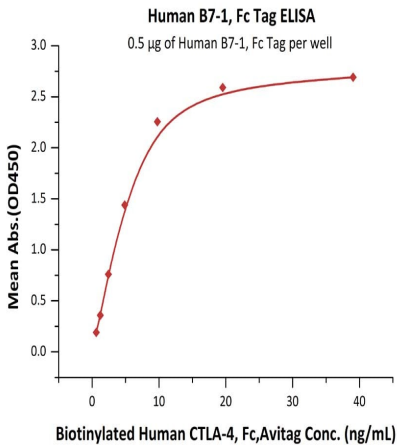
Function	Involved in the costimulatory signal essential for T-lymphocyte activation. T-cell proliferation and cytokine production is induced by the binding of CD28 or CTLA-4 to this receptor.
Tissue specificity	Expressed on activated B-cells, macrophages and dendritic cells.
Sequence similarities	<p>Contains 1 Ig-like C2-type (immunoglobulin-like) domain.</p> <p>Contains 1 Ig-like V-type (immunoglobulin-like) domain.</p>

Images



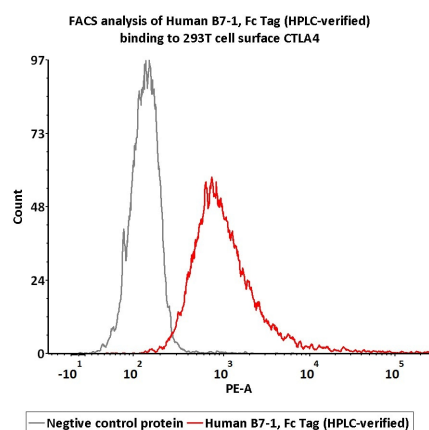
SDS-PAGE - Recombinant human CD80 protein (ab173993)

Reduced SDS-PAGE analysis of ab173993, stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.



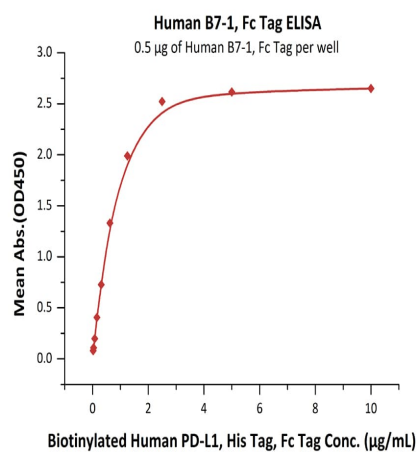
ELISA - Recombinant human CD80 protein (ab173993)

Immobilized ab173993 at 5 µg/mL (100 µL/well) can bind Recombinant Human CTLA4 (biotinylated) protein (**ab207136**) with a linear range of 0.6-10 ng/mL.



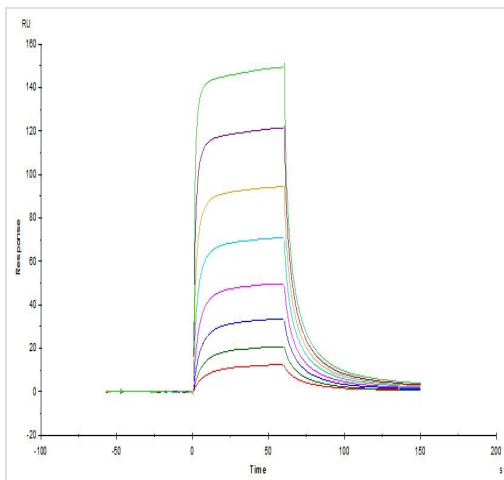
FACS assay shows that ab173993 can bind to 293T cells overexpressing human CTLA4 protein. The concentration of ab173993 is 1 $\mu\text{g/mL}$.

Functional Studies - Recombinant human CD80 protein (ab173993)



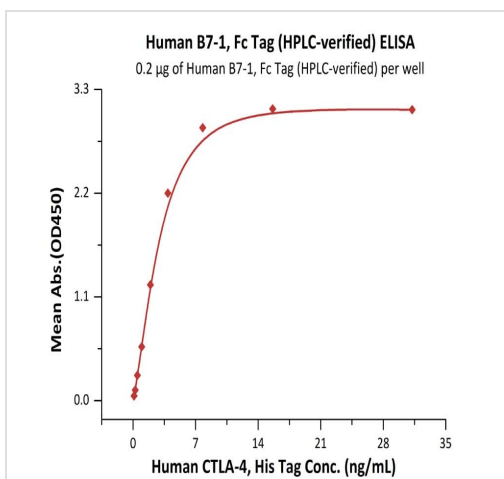
Immobilized ab173993 at 5 $\mu\text{g/mL}$ (100 $\mu\text{L/well}$) can bind Biotinylated Human PD-L1, His Tag, Fc Tag (**ab246118**) with a linear range of 0.02-1.25 $\mu\text{g/mL}$.

Functional Studies - Recombinant human CD80 protein (ab173993)



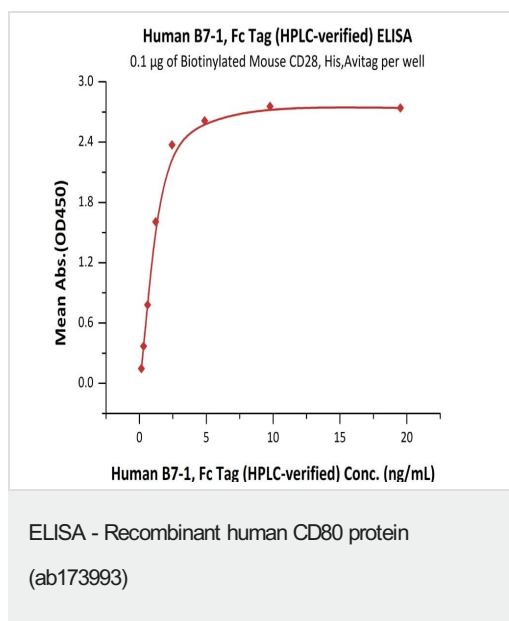
Functional Studies - Recombinant human CD80 protein (ab173993)

Immobilized Human CD28, on CM5 Chip can bind ab173993 with an affinity constant of 2.01 μM as determined in a SPR assay.

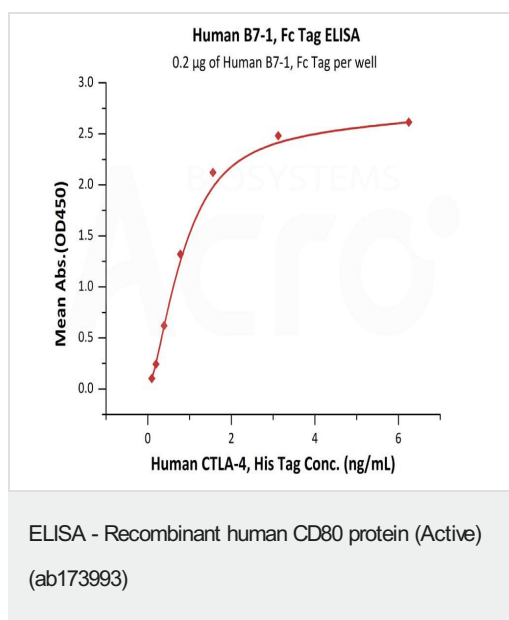


ELISA - Recombinant human CD80 protein (ab173993)

Immobilized ab173993 at 2 $\mu\text{g/mL}$ (100 $\mu\text{L/well}$) can bind Recombinant human CTLA4 protein (**ab167727**) with a linear range of 0.5-4 ng/mL.



Immobilized Biotinylated Mouse CD28, His, Avitag at 1 µg/mL (100 µL/well) on streptavidin precoated (0.5 µg/well) plate, can bind ab173993 with a linear range of 0.2-2 ng/mL.



ab173993 at 2 µg/mL (100 µL/well) can bind Human CTLA-4, His Tag with a linear range of 0.1-2 ng/mL (QC tested).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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