

## Biotin Human B7-1 (CD80) Protein (C-His-Avi)

<b>Catalog Number:</b>	816603, 816604
<b>Size:</b>	25 ug, 100 ug
<b>Target Name:</b>	CD80, B7-1, B7, BB1
<b>Regulatory Status:</b>	RUO

### PRODUCT DETAILS

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<b>Application:</b>	ELISA, BLI
<b>Format:</b>	Liquid, Biotinylated
<b>Expression Host:</b>	CHO
<b>Species:</b>	Human
<b>Sources:</b>	Recombinant Human B7-1 (CD80) (Val35-Asn242) with C-terminus His-Avi-tag is expressed in CHO cell. This protein was site-specifically labeled with Biotin by BirA ligase.
<b>Accession Number:</b>	Q68D85
<b>Molecular Weight:</b>	The protein has a predicted molecular weight of 27.5 kDa. Under DTT-reducing conditions, it migrates at approximately 45 kDa on SDS-PAGE.
<b>Affinity Tag:</b>	C-His-Avi
<b>Purity:</b>	>95% based on SDS-PAGE under reducing condition
<b>Formulation:</b>	1xPBS buffer, pH7.4, 0.22 µm filtered
<b>Endotoxin level:</b>	Not tested
<b>Protein Concentration:</b>	25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration.
<b>Storage and Handling:</b>	Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at ≤ -70°C to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability.

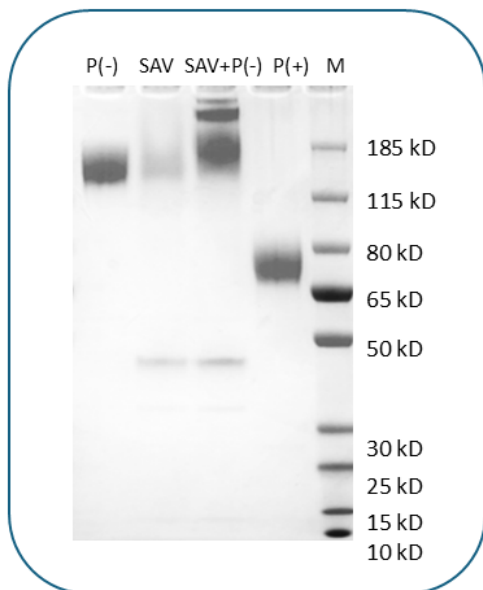
### BACKGROUND INFORMATION

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B7-1, also known as CD80, is a cell surface glycoprotein in the immunoglobulin superfamily, expressed on activated B cells, macrophages, and dendritic cells. It interacts with the costimulatory receptors CD28 and CTLA-4 on T cells, playing a pivotal role in regulating T cell activation, tolerance, cytokine production, and the generation of cytotoxic T lymphocytes. Through its interactions with CD28 and CTLA-4, CD80 is involved in both enhancing and inhibiting immune responses, thereby maintaining immune balance. This B7/CD28/CTLA-4 pathway is crucial for controlling immune function and is considered a promising target for therapeutic interventions in autoimmune diseases and cancer.

## PRODUCT DATA

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Human B7-1 (CD80) Protein (C-His-Avi) was biotinylated in vitro using BirA ligase. SDS-PAGE analysis under reducing (P+) and non-reducing (P-) conditions shows the protein has a purity greater than 95%. A gel shift assay using co-incubation with streptavidin indicates that the biotinylation efficiency of Human B7-1 protein exceeds 90%.

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