

Active Recombinant Human CD80 Protein, Mouse IgG2a Fc Tagged, Low endotoxin

Cat. No. CD80-11256H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Human B7-1, Mouse IgG2a Fc Tag is expressed from human 293 cells (HEK293). It contains AA Val 35-Asn 242 (Accession # P33681-1). This protein carries a mouse IgG2a Fc tag at the C-terminus. Predicted N-terminus: Val 35

Species

Human

Source

HEK293

ProteinLength

35-242 aa

Description

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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Form	Lyophilized from 0.22 µm filtered solution in Tris with Glycine, Arginine and NaCl, pH7.5 with trehalose as protectant.
Bio-activity	Immobilized Human CTLA-4, His Tag at 1 µg/mL (100 µL/well) can bind Human B7-1, Mouse IgG2a Fc Tag with a linear range of 2-31 ng/mL.
Molecular Mass	The protein has a calculated MW of 50.9 kDa. The protein migrates as 65-85 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 0.01 EU/µg by the LAL method/rFC method.
Purity	>95% as determined by SDS-PAGE. >95% as determined by SEC-MALS.
Storage	This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution. For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 µg/µL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.

GENE INFORMATION

Gene Name	CD80 CD80 molecule [Homo sapiens (human)]
Official Symbol	CD80
Synonyms	CD80; CD80 molecule; CD28LG, CD28LG1, CD80 antigen (CD28 antigen ligand 1, B7 1 antigen), CD80 molecule; T-lymphocyte activation antigen CD80; B lymphocyte

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activation antigen B7; B7 1; B7.1; activation B7-1 antigen; costimulatory factor CD80; CTLA-4 counter-receptor B7.1; B-lymphocyte activation antigen B7; costimulatory molecule variant IgV-CD80; CD80 antigen (CD28 antigen ligand 1, B7-1 antigen); B7; BB1; B7-1; LAB7; CD28LG; CD28LG1;

Gene ID	941
mRNA Refseq	NM_005191
Protein Refseq	NP_005182
MIM	112203
UniProt ID	P33681

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