

Active Recombinant Human CD80 Protein, Flag&His tagged

Cat. No. CD80-60H Lot. No. (See product label)

SPECIFICATION

Product Overview	CD80 dimer protein contains a CD80 extracellular domain (UniProt# P33681) fused with a proprietary dimer motif followed by a tandem Flag-His tag at the C-terminus.
Species	Human
Source	HEK293T
ProteinLength	135-242 aa
Description	Human CD80 (Cluster of differentiation 80) is a type I transmembrane glycoprotein in the immunoglobulin superfamily and is a member of the B7 Family of ligands. CD80 is also known as B7, B7-1, B7.1, BB1, CD28LG, CD28LG1, and LAB7. CD80 contains an extracellular domain (ECD), a transmembrane domain, and a cytoplasmic domain. The ECD consists of two immunoglobulin (Ig)-like subdomains, a variable-like domain (Ig-V-like domain), and a constant-like domain (Ig-C-like domain). It is primarily expressed on antigen-presenting cells (APCs), such as dendritic cells, macrophages, and B cells. CD80 interacts with CTLA-4 (Cytotoxic T-lymphocyte associated protein 4) to transmit an inhibitory signal with T cells and with CD28 (Cluster of differentiation 28) to transmit a stimulatory signal. It is often overexpressed in various autoimmune diseases such as multiple sclerosis and systemic lupus erythematosus, as well as some cancers. CD80 exists as a monomer but its dimeric form can influence immune regulation and contribute to pathogenic conditions. A recombinant protein mimicking the CD80

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

	dimer conformation can be crucial for therapeutic discovery.
Molecular Mass	66 kDa
Homodimer/Heterodimer	Homodimer
Purity	Greater than 90% dimer form as determined by SDS-PAGE under non-reducing condition
Application	Verified Applications: ELISA for CD80-specific antibody and CTLA-4 or CD28 ligand protein binding assays. Suggested Applications ELISA for CD80-specific antibody and CTLA-4 or CD28 ligand protein binding assays. SPR & BLI for CD80-specific antibody: and CTLA-4 or CD28 protein binding assays. Animal immunization, RUO.
Storage	At -80 centigrade
Storage Buffer	0.22µm filtered PBS, pH 7.4
Shipping	Frozen Dry Ice

GENE INFORMATION

Gene ID	941
Gene Name	CD80 CD80 molecule [Homo sapiens (human)]
Official Symbol	941
Synonyms	CD80; CD80 molecule; CD28LG, CD28LG1, CD80 antigen (CD28 antigen ligand 1, B7 1 antigen), CD80 molecule; T-lymphocyte activation antigen CD80; B

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	lymphocyte 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;
mRNA Refseq	NM_005191
Official Symbol 2	CD80
Gene ID 2	941
Gene Name 2	CD80 CD80 molecule [Homo sapiens (human)]
mRNA Refseq 2	NM_005191
Protein Refseq 2	NP_005182
MIM 2	112203
UniProt ID 2	P33681
Bioactivity-Antibody Binding	Immobilized CD80-Flag-His dimer protein at 2 µg/mL (100 µL/well) can bind anti-human CD80 monoclonal antibody with half maximal effective concentration (EC50) range of 4.9-19.6 ng/mL (QC tested).
Bioactivity-Ligand Binding	Immobilized human CTLA-4 dimer protein, His Tag at 2 µg/mL (100 µL/well) can bind human CD80-Flag-His dimer protein, with half maximal effective concentration (EC50) range of 0.4-1.5 ng/mL (QC tested).

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SDS-PAGE

MW: Molecular Weight marker reduced condition NR: CD80 dimer under non-reducing condition

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