

Active Recombinant Human CD80 Homodimer Protein, Fc tagged

Cat. No. CD80-24H 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 human Fc tag at the C-terminus was expressed in HEK293T.

Species Human

Source HEK293T

ProteinLength 35-242 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

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the CD80 dimer conformation can be crucial for therapeutic discovery.

Molecular Mass	100 kDa
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. BLI protein binding assays for CD80 with CTLA-4 and CD28. 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	Store at -80 centigrade.
Storage Buffer	0.22µm filtered PBS, pH 7.4
Shipping	Frozen Dry Ice

GENE INFORMATION

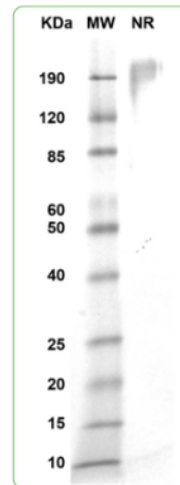
Gene Name	CD80 CD80 molecule [Homo sapiens (human)]
Official Symbol	CD80
Synonyms	CD80; CD80 molecule; CD28LG, CD28LG1, CD80 antigen (CD28 antigen ligand 1, B7 1 antigen), CD80 molecule; T-lymphocyte activation antigen CD80; B lymphocyte activation antigen B7; B7 1; B7.1; activation B7-1 antigen; costimulatory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

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

SDS-PAGE

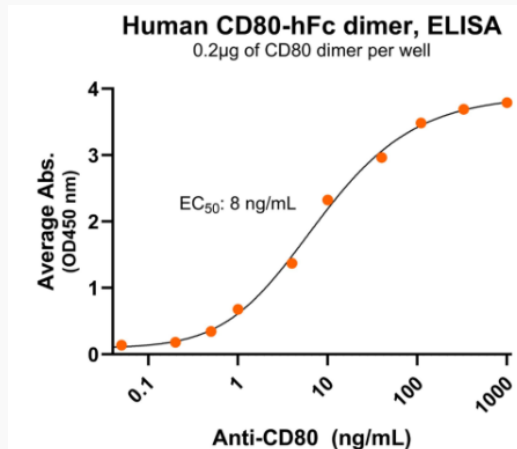
MW: Molecular Weight marker reduced condition NR: CD80 dimer under non-reducing condition

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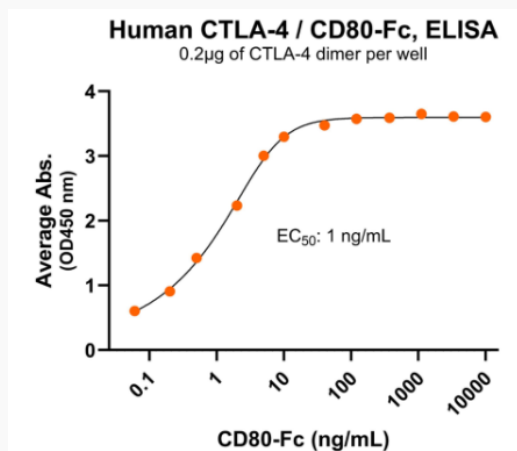
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Bioactivity-Antibody Binding



Immobilize CD80-hFc dimer protein at 2 µg/mL (100 µL/well) can bind anti-human CD80 monoclonal antibody with half maximal effective concentration (EC₅₀) range of 3.9-15.5 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-hFc dimer protein, with half maximal effective concentration (EC₅₀) range of 0.5-2.2 ng/mL (QC tested).

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