

Active Recombinant Mouse CD80 Homodimer Protein, Fc tagged

Cat. No. Cd80-26M **Lot. No.** (See product label)

SPECIFICATION

Product Overview Mouse CD80 protein dimer contains the CD80 extracellular domain (UniProt# Q00609) fused with a proprietary cis-dimer motif followed by a Fc tag at the C-terminus was expressed in HEK293T.

Species Mouse

Source HEK293T

ProteinLength 38-246 aa

Description Cluster of differentiation 80 (CD80) is a Type I transmembrane glycoprotein in the immunoglobulin superfamily and 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 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. While structurally and functionally similar to human CD80, mouse CD80 is a species-specific tool essential for preclinical studies, basic research and translational research in cancer immunotherapy.

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 binding assays and SPR and ELISA for CD80 and CTLA-4 or CD28 ligand protein binding assays. Suggested Applications: SPR & BLI for CD80-specific antibody binding assays and BLI for CD80 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 antigen [Mus musculus (house mouse)]

Official Symbol Cd80

Synonyms CD80; CD80 antigen; T-lymphocyte activation antigen CD80; B7 protein; activation B7-1 antigen; B71; Ly53; TSA1; Cd28l; Ly-53; MIC17;

Gene ID 12519

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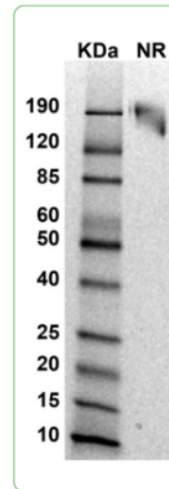
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mRNA Refseq [NM_009855](#)

Protein Refseq [NP_033985](#)

UniProt ID [Q00609](#)

SDS-PAGE



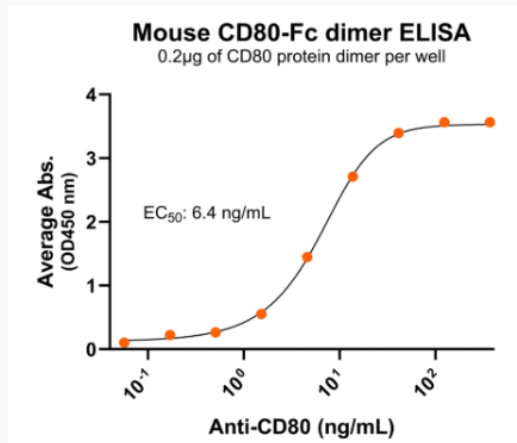
MW: Molecular Weight marker reduced condition NR: CD80 dimer under non-reduced condition

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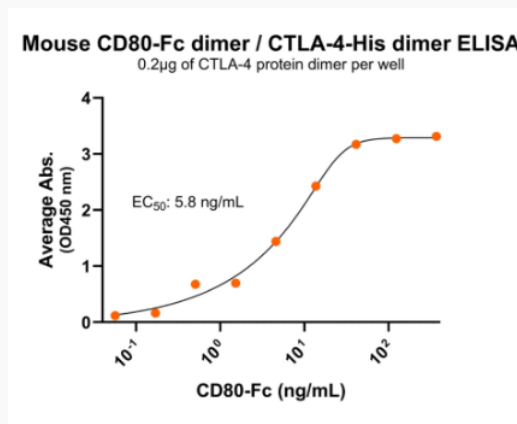
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Bioactivity-Antibody Binding



Immobilized mouse CD80-hFc protein dimer, Fc Tag at 2 µg/mL (100 µL/well) can bind anti-mouse CD80 monoclonal antibody with half maximal effective concentration (EC₅₀) range of 3.2-12.9ng/mL (QC tested).

Bioactivity-Ligand Binding



Immobilized mouse CTLA-4 protein dimer, His Tag at 2 µg/mL (100 µL/well) can bind mouse CD80 protein dimer, Fc Tag, with half maximal effective concentration (EC₅₀) range of 2.9-11.7 ng/mL (QC tested).

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