

Active Recombinant Human CD80 protein, Fc/Avi-tagged, Biotinylated

Cat. No. CD80-051H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Biotinylated Recombinant Human CD80(Val35-Asn242) protein, fused to Fc/Avi tag at the C-terminus, was expressed in CHO cells .
Species	Human
Source	CHO
ProteinLength	Val35-Asn242
Description	B7-1/CD80 and B7-2/CD86, together with their receptors CD28 and CTLA-4, constitute one of the dominant co-stimulatory pathways that regulate T- and B-cell responses (1). Although both CTLA-4 and CD28 can bind to the same ligands, CTLA-4 binds to B7-1 and B7-2 with a 20-100 fold higher affinity than CD28 and is involved in the down-regulation of the immune response (2-6). Mature human B7-1 consists of a 208 amino acid (aa) extracellular domain (ECD) with two immunoglobulin-like domains, a 21 aa transmembrane domain, and a 25 aa cytoplasmic domain (7). Within the ECD, human B7-1 shares 50% aa sequence identity with mouse B7-1. Alternative splicing generates a 30-kDa soluble isoform that lacks the transmembrane segment and retains the ability to bind CD28 and CTLA-4 and an isoform that lacks the second Ig-like domain and the transmembrane segment (8). Both human and mouse B7-1 and B7-2 can bind to either human or mouse CD28 and CTLA-4 (1). B7-1 is expressed on activated B cells, activated T cells, and macrophages. B7-2 is constitutively expressed on interdigitating dendritic cells, Langerhans cells, peripheral

 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

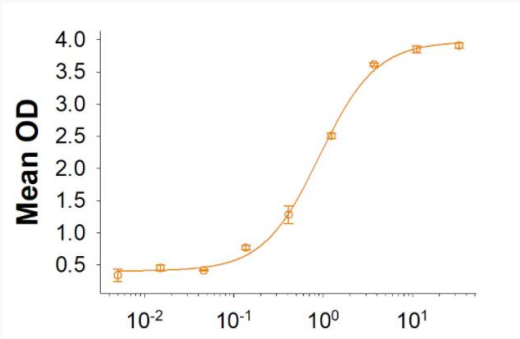
	blood dendritic cells, memory B cells, and germinal center B cells (2).
Predicted N Terminal	Val35
Form	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.
Bio-activity	Measured by its binding ability in a functional ELISA. When Recombinant Human CTLA-4 Fc Chimera is immobilized at 0.25 µg/mL (100 µL/well), the concentration of Biotinylated Recombinant Human CD80 Fc/Avi-tag that produces 50% of the optimal binding response is 0.4-2.4 ng/mL.
Molecular Mass	77-89 kDa, under reducing conditions
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Applications	Bioactivity
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 500 µg/mL in PBS.
Conjugation	Biotin

GENE INFORMATION

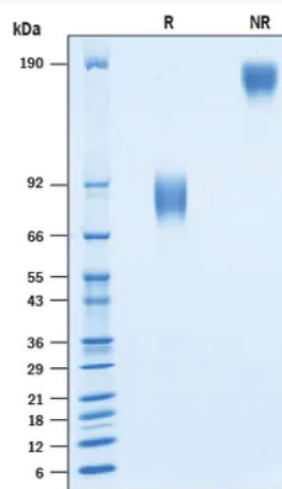
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Gene Name	CD80 CD80 molecule [Homo sapiens]										
Official Symbol	CD80										
Synonyms	CD80; CD80 molecule; CD28LG, CD28LG1, CD80 antigen (CD28 antigen ligand 1, B7 1 antigen) , CD80 molecule; T-lymphocyte activation antigen CD80; B lymphocyte 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;										
Gene ID	941										
mRNA Refseq	NM_005191										
Protein Refseq	NP_005182										
MIM	112203										
UniProt ID	P33681										
Binding Activity	 <table border="1"> <caption>Approximate data points from the Binding Activity graph</caption> <thead> <tr> <th>Concentration</th> <th>Mean OD</th> </tr> </thead> <tbody> <tr><td>10⁻²</td><td>0.5</td></tr> <tr><td>10⁻¹</td><td>0.8</td></tr> <tr><td>10⁰</td><td>2.5</td></tr> <tr><td>10¹</td><td>3.8</td></tr> </tbody> </table>	Concentration	Mean OD	10 ⁻²	0.5	10 ⁻¹	0.8	10 ⁰	2.5	10 ¹	3.8
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SDS-PAGE



2 µg/lane Protein was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining.

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