

B7-1(CD80) Fc Chimera, Human

Cat. No.: Z03409-50

Size: 50.0 ug

Synonyms: CD80; B7; B7-1; B7.1; BB1; CD28LG; CD28LG1; LAB7

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. 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. Mature human B7-1 consists of a 208 amino acid extracellular domain (ECD) with two immunoglobulin-like domains, a 21 amino acid transmembrane domain, and a 25 amino acid cytoplasmic domain. Both human and mouse B7-1 and B7-2 can bind to either human or mouse CD28 and sCTLA-4. 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 blood dendritic cells, memory B cells, and germinal center B cells.

Recombinant Human B7-1(CD80) Fc Chimera produced in HEK293 cells is a polypeptide chain containing 443 amino acids with the C-terminal human IgG1 Fc fragment. A fully biologically active molecule; rhB7-1(CD80) a molecular mass of 70 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 VIHVTKEVKE VATLSCGHNV SVEELAQTTRI YWQKEKMMVL
00041 TMMSGDMNIW PEYKNRTIFD ITNLSIVIL ALRPSDEGTY
00081 ECVVLKYEKD AFKREHLAEV TLSVKADFPT PSISDFEIPT
00121 SNIRRIICST SGGFPEPHLS WLENGEELNA INTTVSQDPE
00161 TELYAVSSKL DFNMTTNSHF MCLIKYGLR VNQTFNWNTT
00201 KQEHFPDN
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Source: HEK293

Biological Activity: Activity 1 □ Immobilized CTLA 4 Fc Chimera, Human(Cat.No.Z03373) at 2 µg/mL (100 µL/well) can bind biotinylated B7-1(CD80) Fc Chimera, Human with a linear range of 1.22-9.77 ng/mL.

Activity 2 □ Immobilized CD28 Fc Chimera, Human(Cat.No.Z03413) at 2 µg/mL (100 µL/well) can bind biotinylated B7-1(CD80) Fc Chimera, Human with a linear range of 12.2-390.6 ng/mL.

Molecular Weight: 75-80 kDa; observed by reducing SDS-PAGE.

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 µg/ml.

Purity: > 95% as analyzed by reducing SDS-PAGE.

Endotoxin Level: < 0.2 EU/µg, determined by LAL method.

Storage: Lyophilized recombinant B7-1(CD80), Human remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution; Human B7-1(CD80) should be stable up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.