

DATASHEET

Version 20181206

4-1BB (CD137) Fc Chimera, Human

Cat. No.: Z03382-1

Size: 1.0 mg

Synonyms: 4-1BB; CD137

Description:

4-1BB(CD137) is a member of the tumor necrosis factor (TNF) receptor family. Its alternative names are tumor necrosis factor receptor superfamily member 9 (TNFRSF9), 4-1BB and induced by lymphocyte activation (ILA). Mature human 4-1BB consists of a 163 amino acid extracellular domain (ECD) with four TNFR cysteine-rich repeats, a 27 aa transmembrane segment, and a 42 aa cytoplasmic domain; 4-1BB (CD137) is expressed as a disulfide-linked homodimer on various populations of activated T cell including CD4+, CD8+, memory CD8+, NKT, and regulatory T cells as well as on myeloid and mast cell progenitors, dendritic cells, mast cells, and bacterially infected osteoblasts. It binds with high affinity to the transmembrane 4-1BB Ligand/TNFSF9 which is expressed on antigen presenting cells and myeloid progenitor cells. This interaction co stimulates the proliferation, activation, and/or survival of the 4-1BB expressing cell. It can also enhance the activation-induced cell death of repetitively stimulated T cells.

Recombinant Human 4-1BB(CD137) Fc Chimera produced in CHO cells is a polypeptide chain containing 397 amino acids with the C-terminal human IgG1 Fc fragment. A fully biologically active molecule, rh4-1BB has a molecular mass of 55-60 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

Leu²⁴-Gln¹⁸⁶ (Accession #: Q07011), expressed with a C-terminal human IgG1 Fc fragment.

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00001 LQDPCSNCPA GTFCDNNRNQ ICSPCPPNSF SSAGGQRTCD
00041 ICRQCKGVFR TRKECSSTSN AECDCTPGFH CLGAGCSMCE
00081 QDCKQGQELT KKGCKDCCFG TFNDQKRGIC RPWTNCSLDG
00121 KSVLVNGTKE RDVVCGPSPA DLSPGASSVT PPAPAREPGH
00161 SPQ
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Source: CHO

Biological Activity: Measured by its binding ability in a ligand-receptor binding ELISA. When recombinant human 4-1BB Fc Chimera is immobilized at 1 µg/mL (100 µL/well), the concentration of recombinant human 4-1BB Ligand that produces 50% optimal binding response is found to be approximately 5-15 ng/mL.

Molecular Weight: 55-60 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 Human 4-1BB(CD137) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Human 4-1BB 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.