

## 4-1BB/CD137/TNFRSF9 Protein, Human, Recombinant (CHO, hFc)

### General Information

Synonyms:	T-cell antigen ILA;CD137 antigen;TNFRSF9;4-1BB
Protein Construction:	Leu24-Gln186
Species:	Human
Expression Host:	CHO Cells
Accession:	Q07011
Molecular Weight:	55~60 kDa (Reducing conditions)

### QC Testing

Biological Activity:	Measured by its binding ability in a ligand-receptor binding ELISA. When recombinant 4-1BB/CD137/TNFRSF9, hFc, Human is Immobilized at 1.0 µg/ml (100 µl/well), the concentration of recombinant human 4-1BB Ligand that produces 50% optimal binding response is found to be approximately 5.0-15.0 ng/ml.
Purity:	> 95% as determined by SDS-PAGE
Endotoxin:	< 0.2 EU/µg of protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 µm filtered solution in PBS.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for 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.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

4-1BB(CD137) is a member of the tumor necrosis factor (TNF) receptor family. 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

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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.

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