

## Technical Data Sheet

### Biotinylated Human CD137/4-1BB/TNFRSF9 (C-Fc-Avi)

**Catalog Number:** 808703, 808704

**Size:** 25 ug, 100 ug

**Target Name:** TNFRSF9, 4-1BB, CD137

**Regulatory Status:** RUO

#### Product Details

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**Application:** ELISA, BLI

**Format:** Liquid, Biotinylated

**Expression Host:** CHO

**Species:** Human

**Sources:** Recombinant Human CD137/4-1BB Protein (Leu24-Gln186) with C-terminus Fc-Avi-tag is expressed in CHO cell. This protein was site-specifically labeled with Biotin by BirA ligase.

**Accession Number:** Q07011

**Molecular Weight:** The protein has a predicted molecular weight of 45.6 kDa. Under DTT-reducing conditions, it migrates at approximately 55-60 kDa on SDS-PAGE.

**Affinity Tag:** C-Fc-Avi

**Purity:** >95% based on SDS-PAGE under reducing condition

**Formulation:** 1xPBS buffer, pH7.4, 0.22 µm filtered

**Endotoxin level:** Not tested

**Protein Concentration:** 25µg size is bottled at 0.2mg/mL concentration. 100 µg size is supplied at a lot-specific concentration.

**Storage and Handling:** Briefly centrifuge the vial upon receipt. An unopened vial can be stored at 4°C for up to 2 weeks, or at -20°C or below for up to six months. The protein may be further diluted to 0.1 mg/mL using 0.22 µm-filtered PBS buffer (pH 7.4). For long-term storage, the diluted stock solution should be aliquoted and stored at ≤ -70°C to minimize freeze-thaw cycles. If additional dilution is required, carrier proteins such as FBS or BSA should be added to maintain protein stability.

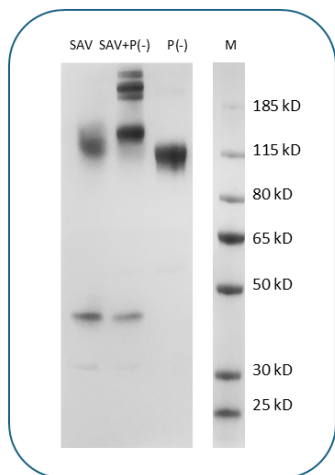
#### Background Information

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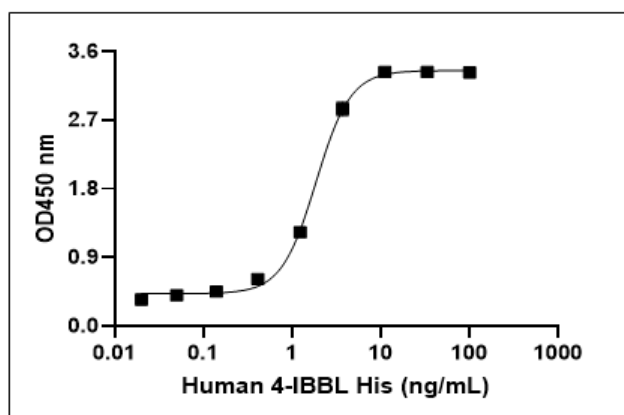
CD137 (4-1BB) is a co-stimulatory glycoprotein from the tumor necrosis factor (TNF) receptor superfamily, expressed on activated CD4+ and CD8+ T cells. It binds to its ligand, 4-1BBL, found on antigen-presenting cells like macrophages and activated B cells. The interaction between CD137 and 4-1BBL triggers signaling through tumor necrosis factor receptor-associated factors (TRAFs), activating pathways like NF-kappaB and cytokine production. This process promotes T cell activation, proliferation, and immune responses, as well as monocyte and B-cell activation. CD137 and 4-1BBL are present in various human tumors, suggesting they may influence tumor progression. Crosslinking CD137 has shown promise in enhancing anti-tumor immunity in preclinical models, and agonistic anti-CD137 antibodies are currently being tested in phase I clinical trials. Additionally, soluble CD137 (sCD137) can antagonize the membrane-bound form's function, reducing T cell

proliferation and IL-2 secretion.

## Product Data



Human CD137/4-1BB Protein (C-Fc-Avi) was biotinylated in vitro using BirA ligase. SDS-PAGE analysis under non-reducing (P-) conditions shows the protein has a purity greater than 95%. A gel shift assay using co-incubation with streptavidin indicates that the biotinylation efficiency of the CD137 protein exceeds 90%.



Biotinylated Human CD137/4-1BB (C-Fc-Avi) is coated at 2ug/mL (200ng/well). Human 4-1BB Ligand (N-His, catalog 606401) can bind Biotinylated Human CD137/4-1BB (C-Fc-Avi) in dose-dependent manner with the ED50 of 2-10 ng/mL.