

## HUMAN 4-1BB LIGAND PROTEIN, MFC-HIS TAG

**Cat.#:** 11178

**Product Name:** Human 4-1BB Ligand Protein

**Size:** 10 µg, 50 µg and 100 µg

**Synonyms:** 4-1BB Ligand;NFSF9;D137L

**Target:** 4-1BB Ligand

**UNIPROT ID:** P41273

**Description:** Recombinant human 4-1BB Ligand Protein with N-terminal mouse Fc and C-terminal 6xHis tag

**Background:** The protein encoded by this gene is a cytokine that belongs to the tumor necrosis factor (TNF) ligand family. This transmembrane cytokine is a bidirectional signal transducer that acts as a ligand for TNFRSF9/4-1BB, which is a costimulatory receptor molecule in T lymphocytes. This cytokine and its receptor are involved in the antigen presentation process and in the generation of cytotoxic T cells. The receptor TNFRSF9/4-1BB is absent from resting T lymphocytes but rapidly expressed upon antigenic stimulation. The ligand encoded by this gene, TNFSF9/4-1BBL, has been shown to reactivate anergic T lymphocytes in addition to promoting T lymphocyte proliferation. This cytokine has also been shown to be required for the optimal CD8 responses in CD8 T cells. This cytokine is expressed in carcinoma cell lines, and is thought to be involved in T cell-tumor cell interaction.

**Species/Host:** HEK293

**Molecular Weight:** The protein has a predicted molecular mass of 49.8 kDa after removal of the signal peptide. The apparent molecular mass of mFc-4-1BB Ligand-His is approximately 53-70 kDa due to glycosylation.

**Molecular Characterization:** mFc(Pro99-Lys330) 4-1BB Ligand(Pro52-Glu254) 6xHis

**Purity:** The purity of the protein is greater than 95% as determined by SDS-PAGE and Coomassie blue staining.

**Formulation & Reconstitution:** Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5% – 8% trehalose is added as protectants before lyophilization.

**Storage & Shipping:** Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.

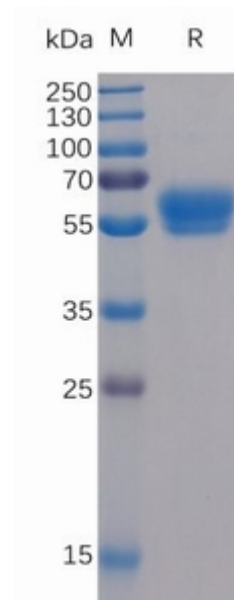


Figure 1. Human 4-1BB Ligand Protein, mFc-His Tag on SDS-PAGE under reducing condition.

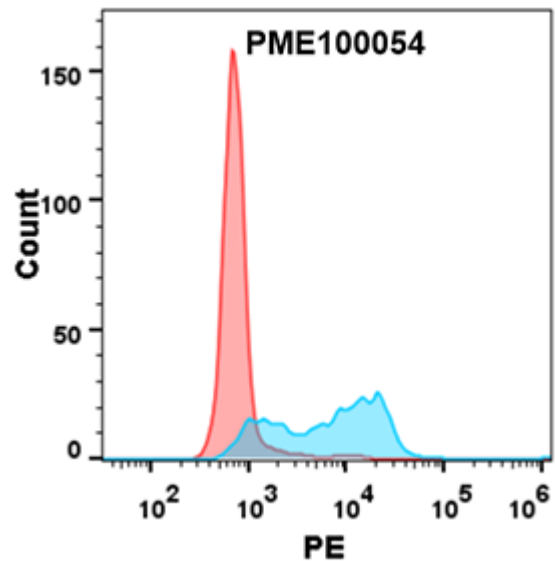


Figure 2. Flow cytometry analysis with 15ug/ml Human 4-1BB Ligand Protein, mFc-His tag (11178) on Expi293 cells transfected with human 4-1BB (Blue histogram) or Expi293 transfected with irrelevant protein (Red histogram).