

## PRODUCT INFORMATION

<b>Target</b>	4-1BB Ligand
<b>Synonyms</b>	4-1BB Ligand;TNFSF9;CD137L
<b>Description</b>	Recombinant human 4-1BB Ligand Protein with N-terminal mouse Fc and C-terminal 6×His tag
<b>Delivery</b>	In Stock
<b>Uniprot ID</b>	P41273
<b>Expression Host</b>	HEK293
<b>Tag</b>	N-Mouse Fc and C-6×His Tag
<b>Molecular Characterization</b>	mFc(Pro99-Lys330) 4-1BB Ligand(Pro52-Glu254) 6×His
<b>Molecular Weight</b>	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.
<b>Purity</b>	The purity of the protein is greater than 95% as determined by SDS-PAGE and Coomassie blue staining.
<b>Formulation &amp; Reconstitution</b>	Lyophilized from sterile PBS, pH 7.4. Normally 5% - 8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions of reconstitution.
<b>Storage &amp; Shipping</b>	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.
<b>Background</b>	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.
<b>Usage</b>	Research use only



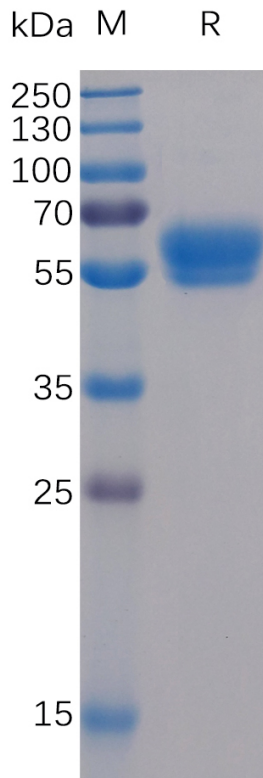


Figure 1. Human 4-1BB Ligand Protein, mFc-His Tag on SDS-PAGE under reducing condition.

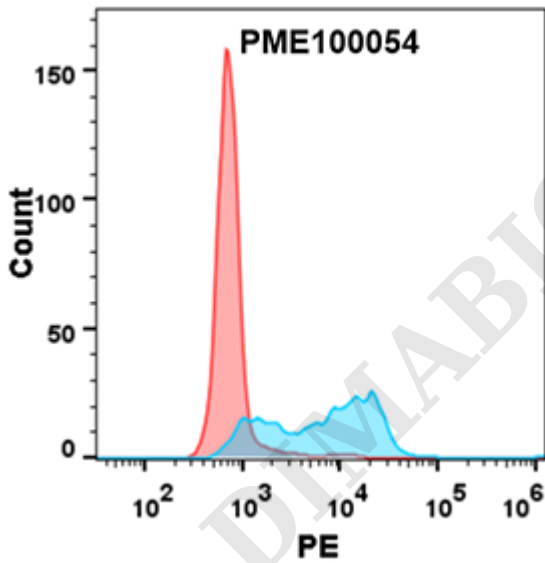


Figure 2. Flow cytometry analysis with 15ug/ml Human 4-1BB Ligand Protein, mFc-His tag (PME100054) on Expi293 cells transfected with human 4-1BB (Blue histogram) or Expi293 transfected with irrelevant protein (Red histogram).

