

## Recombinant Human 4-1BB Ligand/TNFSF9/4-1BBL Protein

### Product Information

Product Name	Cat#	Size
Recombinant Human 4-1BB Ligand/TNFSF9/4-1BBL Protein	90609ES08	5µg
	90609ES20	20µg
	90609ES50	50µg
	90609ES60	100µg
	90609ES80	1mg

### Product Description

4-1BBL, a member of the TNF superfamily, is expressed in B cells, dendritic cells, activated T cells and macrophages. 4-1BBL binds to its receptor 4-1BB, and provides a co-stimulatory signal for T cell activation and expansion. The human 4-1BBL gene codes for a 254 amino acid type II transmembrane containing a 28 amino acid cytoplasmic domain, a 21 amino acid transmembrane protein domain, and a 205 amino acid extracellular domain. The soluble form of 4-1BBL contains the TNF-like portion of the extracellular domain of 4-1BBL. Recombinant Human 4-1BBL is a soluble 19.5 kDa protein consisting of 185 amino acid residues.

### Product Properties

<b>Synonyms</b>	TNFSF9, CD137L
<b>Accession</b>	P41273
<b>GeneID</b>	8744
<b>Source</b>	E.coli-derived Human 4-1BB Ligand/TNFSF9 protein,Arg71-Glu254.
<b>Molecular Weight</b>	Approximately 19.4 kDa.
<b>AA Sequence</b>	REGPELSPDD PAGLLDLRQG MFAQLVAQNV LLIDGPLSWY SDPGLAGVSL TGGLSYKEDT KELVVAKAGV YYVFFQLELR RVVAGEGSGS VSLALHLQPL RSAAGAAALA LTVDLPPASS EARNSAFGFQ GRLLHLSAGQ RLGVHLHTEA RARHAWQLTQ GATVGLGLFRV TPEIPAGLPS PRSE
<b>Tag</b>	None
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	> 95% by SDS-PAGE and HPLC analyses.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by stimulation of IL-8 production using human PBMC is less than 10 ng/mL, corresponding to a specific activity of > 1.0 × 10 <sup>5</sup> IU/mg.
<b>Endotoxin</b>	< 1.0 EU per 1µg of the protein by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.

### Shipping and Storage

The products are shipped with ice pack and can be stored at -20°C to -80°C for 1 year.

Recommend to aliquot the protein into smaller quantities when first used and avoid repeated freeze-thaw cycles.

### **Cautions**

1. Avoid repeated freeze-thaw cycles.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. For research use only.