

## LeadGMP® Human 4-1BBL Protein, His Tag, E. coli

**Catalog Number** LDG020PHE-GMP

**Package** 100 µg / 1 mg / Customized package

For full product information, images and publications, please visit [our website](#).



### Specifications

#### Species of Origin

Human

#### Affinity Tag

His Tag (C-term)

#### Purity

>95% as determined by SDS-PAGE analysis.

#### Activity

Measure by its ability to induce IL-8 secretion in human PBMCs. The ED<sub>50</sub> for this effect is 1-5 ng/mL.

#### Mycoplasma

Not detected

#### Expression System

Escherichia coli

#### Storage Buffer

Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.

#### Molecular weight

The protein has a calculated MW of 20.4 kDa. The protein migrates as 20 kDa under reducing condition (SDS-PAGE analysis).

#### Endotoxin Level

<0.05 EU per 1 µg of the protein by the LAL method.

#### Form

Lyophilized

### Background

#### Tainan Headquarters

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### Background

4-1BB ligand (4-1BBL) is a type II transmembrane protein that is part of the tumor necrosis factor (TNF) ligand family. As an inducible co-stimulatory molecule, it presents on several antigen presenting cell (APC) types, including B cells, macrophages and DCs. The interactions between 4-1BB and 4-1BBL trigger pleiotropic effects on the immune response including antigen presenting process, proliferation of CD4 and CD8 positive T-cells, as well as cytokine secretion from T-cells through NFκB, c-Jun, and p38 downstream signal pathways activation. Therefore, 4-1BB and 4-1BBL are recently used for the immunotherapy of cancer.

### Uniprot ID

P41273

### Synonyms

Tumor necrosis factor ligand superfamily member 9

### Sequence Note

Arg71-Glu254

## Instruction

### Reconstitution

It is recommended to reconstitute the lyophilized protein in sterile H<sub>2</sub>O to a concentration not less than 0.5 mg/mL and incubate the stock solution for at least 20 min to ensure sufficient re-dissolved.

### Shipping

The product is shipped with polar packs. Upon receipt, store it immediately at -20°C or lower for long term storage.

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## Stability & Storage

This product is stable after storage at:

- -20°C for 12 months in lyophilized state from date of receipt.
- -20°C or -80°C for 1 month under sterile conditions after reconstitution.

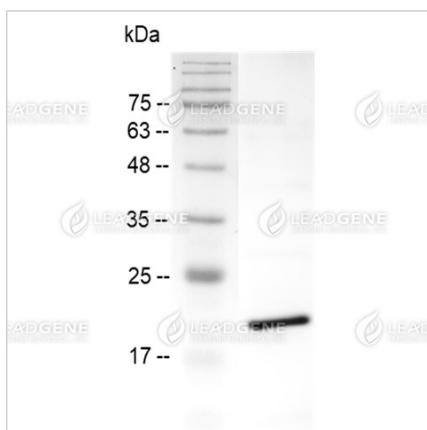
Avoid repeated freeze/thaw cycles.

## Manufacturing Specifications

LeadGMP® recombinant proteins are manufactured in ISO 13485:2016 and GMP certified facility. The processes include:

- Animal-free reagent and laboratory
- Manufactured and tested under GMP guideline
- Testing and traceability of raw material
- Records of the maintenance and equipment calibration
- Personnel training records
- Batch-to-batch consistency
- Documentation of QA control and process changes
- Manufactured and tested under an ISO 13485:2016 certified quality management system
- Stability monitor of product shelf-life

## Image



SDS-PAGE analysis of LeadGMP® 4-1BBL, Human

**Disclaimer** : For Research Use or Further Manufacturing Only.

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