

## LeadGMP® Human GM-CSF Protein, His Tag, E. coli

**Catalog Number** LDG012PHE-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 (N-term)

#### Purity

>98% as determined by SDS-PAGE analysis.

#### Activity

Measure by its ability to induce TF-1 cells proliferation. The ED<sub>50</sub> for this effect is <80 pg/mL. The specific activity of recombinant human GM-CSF is approximately >1 x 10<sup>7</sup> IU/mg.

#### Mycoplasma

Not detected

#### Expression system

Escherichia coli

#### Buffer

Lyophilized from a 0.2 µm filtered solution of PBS, pH 8.0.

#### Molecular weight

The protein has a calculated MW of 15.4 kDa. The protein migrates as 15 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 Headquarter

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### Background

Granulocyte-macrophage colony-stimulating factor (GM-CSF) was first identified as a growth factor due to its ability to induce proliferation and differentiation of bone marrow progenitors into granulocytes and macrophages. GM-CSF is produced by multiple cell types including activated T cells, B cells, macrophages, endothelial cells and fibroblasts upon receiving immune stimuli. GM-CSF stimulates stem cells to produce granulocytes and monocytes functions as a cytokine.

### Uniprot ID

P04141

### Synonyms

Granulocyte-macrophage colony-stimulating factor, Colony-stimulating factor , CSF, Molgramostin, Sargramostim

### Sequence Note

Ala18-Glu144

## 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.

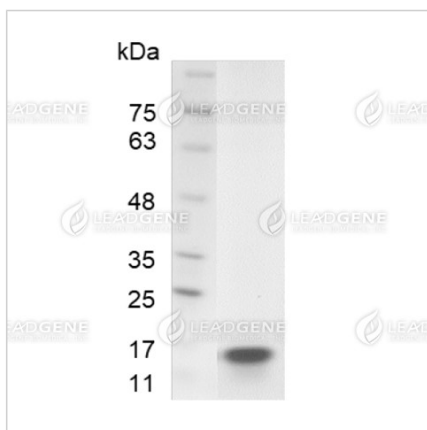
Avoid repeated freeze/thaw cycles.

### 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®  
GM-CSF, Human

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

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