

## LeadGMP® Human IL-18 Protein, Tag Free, E. coli

**Catalog Number** LDG025PHE-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

Tag Free

#### Purity

>97% as determined by SDS-PAGE analysis.

#### Activity

Measure by its ability to induce IFN gamma secretion in KG-1 cells. The ED<sub>50</sub> for this effect is <6 ng/mL. The specific activity of recombinant LeadGMP® human IL-18 is > 1 x 10<sup>7</sup> IU/mg, which is calibrated against the human IL-18 WHO Reference Reagent (NIBSC code: 03/200).

#### Mycoplasma

Not detected

#### Expression system

Escherichia coli

#### Buffer

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

#### Molecular weight

The protein has a calculated MW of 18.2 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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#### Innovation & Research Center

+886-2-27065528

#### CLD Center

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### Background

Interleukin-18 (IL-18) belongs to the IL-1 superfamily and is constitutively produced by macrophages, dendritic cells (DCs) and other cells. IL-18 binds to the receptor of IL-18 (IL-18R) and initiate the recruitment and heterodimerization of the IL-18RAcP, leading to downstream activation of NF- $\kappa$ B. After stimulation with IL-18, multiple cytokines including IFN- $\gamma$ , IL-13, IL-4, IL-8, and GM-CSF and both Th1 and Th2 lymphokines could be produced by different cells. As an immunoregulatory cytokine, IL-18 can promote development of T helper 1 (Th1) cells, which maximizes the production of IFN by synergistically stimulating to mature Th1 effectors in combination with IL-12. On the contrary, it inhibits the production of the anti-inflammatory cytokine IL-10. In addition, IL-18 exhibits multiple proinflammatory functions, such as increases in cell adhesion molecules, nitric oxide synthesis, and chemokine production.

### Uniprot ID

Q14116

### Synonyms

Interleukin-18, Ibctadekin, Interferon gamma-inducing factor, IFN-gamma-inducing factor, Interleukin-1 gamma, IL-1 gamma

### Sequence Note

Tyr37-Asp193

## 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.

### 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.

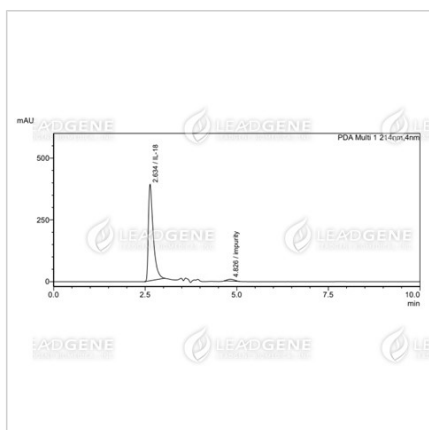
Avoid repeated freeze/thaw cycles.

### Manufacturing specifications

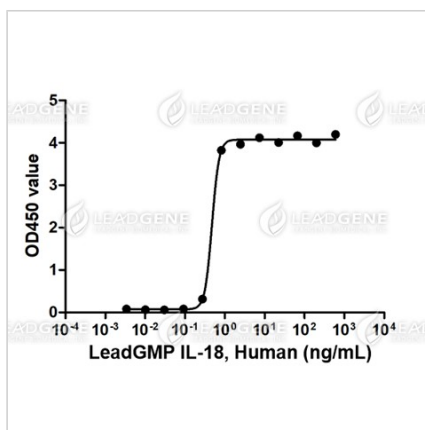
LeadGMP® recombinant proteins are manufactured in ISO 13485:2016 and GMP certified facility. The processes include:

- 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

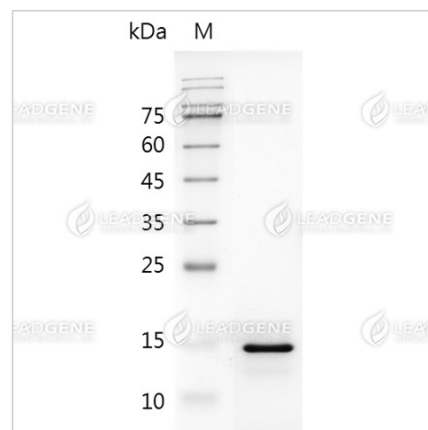
## Image



The purity of LeadGMP® Human IL-18 Protein is greater than 95% as determined by RP-HPLC.





LeadGMP® Human IL-18 Protein, Tag Free, E. coli (LDG025PHE-GMP) induces IFN gamma secretion in KG-1 cells, with the ED50 < 6 ng/mL.



SDS-PAGE analysis of LeadGMP® IL-18, Human

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

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