

RP00006

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# Recombinant Human IL-18 Protein

Catalog No.: RP00006

Recombinant

## Sequence Information

Species	Gene ID	Swiss Prot
Human	3606	Q14116

### Tags

No tag

### Synonyms

IL18;IGIF;IL-18;IL-1g;IL1F4

## Background

Interleukin-18 (IL-18, also known as interferon-gamma inducing factor) is a proinflammatory cytokine that belongs to the IL-1 superfamily and is produced by macrophages and other cells. IL-18 activation is induced by infection or tissue damage and contributes to disease pathology in chronic inflammation. In the presence of IL-12 or IL-15, IL-18 enhances anti-viral Th1 immune responses by inducing IFN-gamma production and the cytolytic activity of CD8+ T cells and NK cells. In the absence of IL-12 or IL-15, however, IL-18 promotes production of the Th2 cytokines IL-4 and IL-13 by CD4+ T cells and basophils. In the presence of IL-1 beta or IL-23, IL-18 induces the antigen-independent production of IL-17 by gamma  $\delta$  T cells and CD4+ T cells. IL-18 also promotes myeloid dendritic cell maturation and triggers neutrophil respiratory burst. In cancer, IL-18 exhibits diverse activities including enhancing anti-tumor immunity, inhibiting or promoting angiogenesis, and promoting tumor cell metastasis.

## Product Information

Source	Purification
<I>E. coli</I>	> 95% by SDS-PAGE.

### Endotoxin

< 0.1 EU/ $\mu$ g of the protein by LAL method.

### Formulation

Lyophilized from a 0.22  $\mu$ m filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Basic Information

### Description

Recombinant Human IL-18 Protein is produced by <I>E. coli</I> expression system. The target protein is expressed with sequence (Tyr37-Asp193) of human IL-18 (Accession #NP\_001553.1).

### Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized recombinant Human IL18 at 5  $\mu$ g/mL (100  $\mu$ L/well) can bind recombinant Human IL18BP $\alpha$  with a linear range of 0.156-1.372  $\mu$ g/mL. 2. Measured by its ability to induce IFN-gamma secretion by KG1 human acute myelogenous leukemia cells in the presence of TNF- $\alpha$  (Catalog: RP00001). The ED<sub>50</sub> for this effect is 1.44-5.76 ng/mL, corresponding to a specific activity of  $1.7 \times 10^5 \sim 6.9 \times 10^5$  units/mg.

### Storage

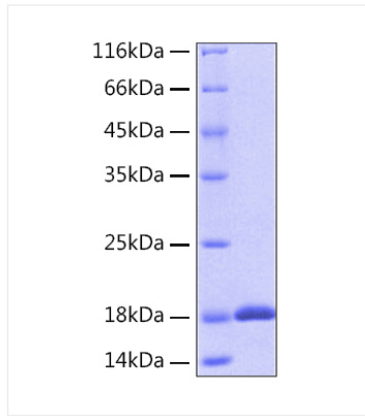
Store the lyophilized protein at -20°C to -80 °C for long term. After reconstitution, the protein solution is stable at -20 °C for 3 months, at 2-8 °C for up to 1 week. Avoid repeated freeze/thaw cycles.

## Contact

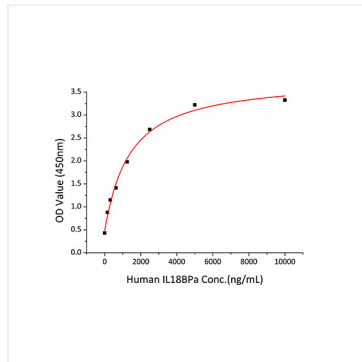


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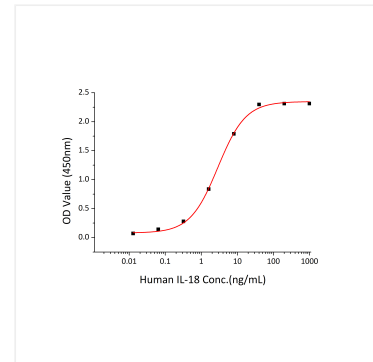
## Validation Data



Recombinant Human IL-18 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 18 kDa.



Immobilized recombinant Human IL18 at 5μg/mL (100μL/well) can bind recombinant Human IL18BPα with a linear range of 0.156-1.372μg/mL.



Recombinant Human IL-18 induce IFN-γ secretion by KG-1 human acute myelogenous leukemia cells in the presence of TNF-α(Catalog: RP00001). The ED<sub>50</sub> for this effect is 1.44-5.76 ng/mL, corresponding to a specific activity of 1.7×10<sup>5</sup>~6.9×10<sup>5</sup> units/mg.