

# Human pro form of IL18 / Interleukin 18 / IGIF Protein (GST Tag)(Inactive)

Catalog Number: 10119-H09E



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

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

### Protein Construction:

A DNA sequence encoding the pro form of human IL18 (Q14116) (Met1-Asp193) was fused with the GST tag at the N-terminus.

**Source:** Human

**Expression Host:** E. coli

## QC Testing

**Purity:** > 85 % as determined by SDS-PAGE

### Endotoxin:

Please contact us for more information.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Met

### Molecular Mass:

The recombinant pro form of human IL18 consists of 419 amino acids and has a predicted molecular mass of 48.6 kDa.

### Formulation:

Lyophilized from sterile PBS, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

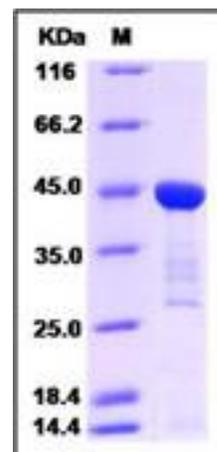
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

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. This cytokine can induce the IFN-gamma production of T cells. The combination of IL-18 and IL12 has been shown to inhibit IL4 dependent IgE and IgG1 production, and enhance IgG2a production of B cells. IL-18 binding protein (IL18BP) can specifically interact with this cytokine, and thus negatively regulate its biological activity. IL-18 is an IL-1-like cytokine that requires cleavage with caspase-1 to become active, was found to increase IgE production in a CD4+ T cells-, IL-4- and STAT6-dependent fashion. IL-18 and T cell receptor-mediated stimulation could induce naïve CD4+ T cells to develop into IL-4-producing cells in vitro. Thus, caspase-1 and IL-18 may be critical in regulation of IgE production in vivo, providing a potential therapeutic target for allergic disorders. IL-18 production in primary synovial cultures and purified synovial fibroblasts was, in turn, upregulated by TNF- $\alpha$  and IL-1 $\beta$ , suggesting that monokine expression can feed back to promote Th1 cell development in synovial membrane. Besides, synergistic combinations of IL-18, IL-12, and IL-15 may be of importance in sustaining both Th1 responses and monokine production in RA.

## References

1. Dinarello CA. (1999) IL-18: A TH1-inducing, proinflammatory cytokine and new member of the IL-1 family. *J Allergy Clin Immunol.* 103: 11-24.
2. Takeda K, *et al.* (1998) Defective NK cell activity and Th1 response in IL-18-deficient mice. *Immunity.* 8(3): 383-90.
3. Gracie JA, *et al.* (1999) A proinflammatory role for IL-18 in rheumatoid arthritis. *J Clin Invest.* 104(10): 1393-401.

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