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

Catalog Number: **10119-H09E**

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General Information

Gene Name Synonym:

IGIF; IL-18; IL-1g; IL1F4; Interleukin 18; Igif; Il-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 ℃

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:

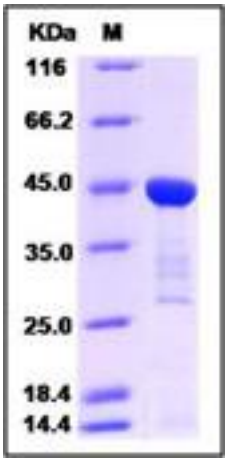
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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-α and IL-1β, 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.