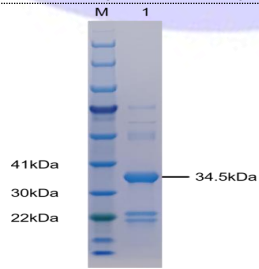


**Human Interleukin 18 (IL-18) Protein, Recombinant****I. For sale**

Product name	Catalog #	Size
Human Interleukin 18 (IL-18) Protein, Recombinant	P0110310	10ug
		50ug
		500ug
		1mg

II. Product Description

Other Names	IGIF; IL-18; IL-1g; IL1F4
Protein & NCBI Number	Q14116, NM_001562
Host	E.coli
Express Region	Met1-Asp193
Protein Sequence	MGSSHMASMSDSEVNQEAKPEVKPEVKPETHINLKVSDGSSEIFFKIKKTTPLRRLME AFAKRQGGKEMDSLRFYLDGIRIQADQTPEDLDMEDNDIIEAHREQIGGMAAEPVED NCINFVAMKFDINTLYFIAEDDENLESDFGKLESKLSVIRNLNDQVLFIDQGNRPLFE DMTDSDCRDNAPRTIFIISMYKDSQPRGMAVTISVKCEKISTLSCENKIISFKEMNPPD NIKDTKSDIIFQRSVPGHDNKMQFESSYEGYFLACEKERDLFKLILKKEDELGDRSIM FTVQNEDKHHHHHH
Molecular Weight	The protein consists of 306 amino acids (including the fusion tag), with a predicted molecular weight of 35.31kDa
Fusion Tag	SUMO(N-terminus), 6 × His (C-terminus)
Purity	≥95% SDS-PAGE
Physical Property	Liquid
Components	0.01M PBS+20% glycerol, sterile solution.
Storage & Stability	After aliquoting, the stability of the samples can be maintained for up to 6 months at -20°C to -80°C, avoiding repeated freeze-thaw cycles.
Applications	Antibody preparation, immunoassay (ELISA, WB), subcellular localization and interaction protein identification, etc.
Lead Time	5 to 10 business days; 2 to 3 days for stock products
Figure. SDS-PAGE	 <p>Bis-Tris (MOPS) SDS-PAGE</p>



III. Storage and Transportation

Transport at 2-8°C, product is stable for up to twelve months from date of receipt under sterile conditions at -20°C to -80°C.

IV. Notes

This product is for research use only. Please wear laboratory attire and disposable gloves when handling.

V. Background

Interleukin-18 belongs to the interleukin-1 family. Interleukin 18 (IL-18) is a potent pro-inflammatory cytokine that can induce the production of interferon- γ (IFN- γ) by Th1 cells, natural killer (NK) cells, and activated macrophages, particularly in the presence of IL-12. IL-18 also participates in regulating the development of T lymphocyte helper type I cells and Fas-mediated cytotoxicity. Inhibition of IL-18 activity is being investigated as a therapeutic approach for the treatment of chronic inflammatory diseases such as Crohn's disease and rheumatoid arthritis. It operates by inducing heterodimerization of its receptors, IL-18R α and IL-18R β , which is structurally similar to IL-1.

The regulatory mechanism of Interleukin-18 is very complex, and its production is modulated by a variety of signaling pathways. Cytokines such as Tumor Necrosis Factor (TNF) and Interleukin (IL-1) can stimulate the production of interleukin-18. Additionally, the Toll-like receptor (TLR) signaling pathway and the NLRP3 Inflammasome are also involved in the regulation of Interleukin-18. Furthermore, certain transcription factors, such as NF- κ B and AP-1, can directly or indirectly influence the production of interleukin-18.

VI. References

1. The structure and binding mode of interleukin-18. Kato, Z., Jee, J., Shikano, H. et al. Nat Struct Mol Biol 10, 966–971 (2003).
2. Interleukin-18, more than a Th1 cytokine. Daniela Novick, Soohyun Kim, Gilles Kaplanski, Charles A. Dinarello. Seminars in Immunology, Volume 25, Issue 6, 2013.
3. IL-18 in inflammatory and autoimmune disease. Sedimbi, S.K., Hägglöf, T. & Karlsson, M.C.I. Cell. Mol. Life Sci. 70, 4795–4808 (2013).
4. Interleukin-18: a regulator of cancer and autoimmune diseases. Esmailbeig, M., Ghaderi, A. Eur Cytokine Netw 28, 127–140 (2017).