Technical Data Sheet

Recombinant human IL-18 protein

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Lot Specific Information

Lot Number: **Lot Specific***

Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Shelf Life

This product has a guaranteed shelf-life of one year from the date of customer receipt when stored as recommended.

Product Information

Catalog Number:	**RP092**
Protein Identity:	Confirmed identity with expected mass, determined by mass spectrometry
Reported Applications:	Drug discovery in inflammation Development and formation of NK cells Stimulation of activated T cell proliferation Hematopoietic stem cell regulation Autoimmune disease research Cancer immunotherapy
Formulation:	Lyophilized, white powder
Endotoxin:	≤0.5 EU/mg, LAL assay
Purity:	≥95%; SDS-PAGE
Reconstitution:	Resuspend in sterile-filtered water at >50 µg/ml. Once reconstituted, store in single-use aliquots to avoid freeze-thaw cycles. Store reconstituted protein at -20 °C to -80 °C for a maximum of 12 months or until the expiry date if sooner.
Sterility:	Sterile
Production:	Microbial. Expressed in E. coli
Molecular Weight:	18 kDa (monomer)
Bioactivity Assay:	No significant difference between EC50 of reference and test lots
Mycoplasma:	Negative

Description

Recombinant human IL-18 protein (interleukin-18) is a pro-inflammatory cytokine of the IL-1 family, produced by macrophages and dendritic cells as an inactive precursor that is activated by caspase-1 cleavage into a ~18 kDa mature protein with a β-trefoil fold. IL-18 binds its receptor (IL-18R) to trigger NF-κB and MAPK signaling, stimulates IFN-γ production by NK cells and CD4+ T-cells to strengthen antiviral and antibacterial defense, works with IL-12 to drive Th1 differentiation, induces TNF-α and promotes immune cell migration by increasing adhesion molecule expression. Excess IL-18 contributes to inflammation in rheumatoid arthritis and inflammatory bowel disease, while deficiency is linked to obesity and type 2 diabetes through effects on insulin sensitivity and lipid metabolism. IL-18 is a therapeutic target in autoimmunity, is explored in cancer immunotherapy to enhance NK and T-cell responses, and is studied as a vaccine adjuvant and in HIV and hepatitis C. It also induces quiescence in hematopoietic stem cells, and its modulation may improve allogeneic stem cell transplantation outcomes, making recombinant IL-18 a key reagent for immunology and stem cell research. This protein is optimized for in vivo and functional applications: low-endotoxin, tag-free, and carrier-free, supporting reproducible performance in demanding preclinical and bioactivity studies. A GMP-grade version of this protein is available for cell and gene therapy manufacturing. Contact us at customerservice@bioxcell.com for details. Species reactivity: human. Species similarity: mouse - 66%, rat - 64%, bovine - 78%, porcine - 75%.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at https://bioxcell.com/faqs.

Store lyophilized protein between -20 °C and -80 °C until the date of expiry. Avoid freeze-thaw cycles

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