

Recombinant Human IL-18

Catalog # FL135

Product Specifications

Appearance	Sterile filtered White lyophilized (freeze-dried) powder.
Purity	> 96% by SDS-PAGE or HPLC.
Endotoxin	< 0.01 EU/μg of rHuIL-18 protein as determined by LAL method.
Expression System	Expressed in E. coli.
Species	Human
Tag	Tag free.
Activity	Fully biologically active when compared to standard substance. Measured by its ability to induce IFN-gamma secretion by KG-1 human acute myelogenous leukemia cells. The ED50 for this effect is 1.5-15 ng/ml.
Formulation	Lyophilized from a 0.2 μm filtered concentrated solution in PBS, pH 7.4.
Reconstitution	Before use this product, please read the direction below carefully. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in a sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20°C. Further dilutions should be made in appropriate buffered solutions.
Accession #	Q14116 Tyr37-Asp193
Amino acid sequence	YFGKLESKLSVIRNLNDQVLFIDQGNRPLFEDMTDSDCRDNAPRTIFIISMYKDSQPRGMAVTISVKCEKISTLSCENKIISFKEMNPPDNIKDTKSDIHFQRSVPGHDNKMQFESSYEGYFLACEKERDLFKLILKKEDELGDRSIMFTVQNE
Molecular weight	Approximately 18.2 kDa, a single non-glycosylated polypeptide chain containing 157 amino acids.
Synonyms	Ibogatadekin, IFN-gamma-inducing factor, IL-1F4, Interleukin-1 gamma
Stability & Storage	Shipped on wet ice. For long term storage, the product should be stored ≤ -20°C. Please avoid repeated freeze-thaw cycles after reconstitution. 36 months from date of receipt, -20 to -70°C as supplied. 1 month, 2 to 8°C under sterile conditions after reconstitution. 3 months, -20 to -70°C under sterile conditions after reconstitution.
Precautions	Recombinant Human IL-18 is for research use only and not for use in diagnostic or therapeutic procedures.

Background

Interleukin-18 (IL-18) is a proinflammatory cytokine in the IL-1 family that exerts distinct immune effects depending on the local cytokine environment. IL-18 activation is induced by infection or tissue damage and contributes to disease pathology in chronic inflammation. IL-18 binds to the widely expressed IL-18 R alpha which recruits IL-18 Rβ to form the signaling receptor complex. Its bioactivity is negatively regulated by interactions with IL-18 binding proteins and virally encoded IL-18BP homologs. 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. Alternative splicing in human ovarian cancer generates an isoform that is resistant to Caspase-1 activation. A cell surface form can be expressed on M-CSF induced macrophages and released in response to bacterial endotoxin. Mature human IL-18 shares approximately 63% amino acid sequence identity with mouse and rat IL-18. Recombinant IL-18 is a single non-glycosylated polypeptide chain containing 157 amino acids.

