BACKGROUND:

Interleukin-18 (IL-18) is an immunoregulatory and proinflammatory cytokine that is initially produced as an inactive precursor in many cell types, including endothelial and epithelial cells. In response to tissue damage or infection, IL-18 is activated by Caspase-1 processing and secreted by macrophage, epithelial, and dendritic cells. IL-18 binds to IL-18 receptor alpha chain (IL-18Rα), which can form a high affinity signaling complex with IL-18 receptor beta chain (IL-18Rβ) to induce downstream signaling. IL-18, together with either IL-12 or IL-15, induces interferon gamma (IFNγ) production in natural killer (NK) cells. IL-18 also functions to induce T cell autoimmune responses, stimulate vascular endothelial cells, maintain homeostasis, and inhibit chondrocyte proteoglycan synthesis. Increased levels of IL-18 contribute to the severity of autoimmune diseases and pulmonary hypertension. Whereas, IL-18 deficiency is consistent with metabolic syndrome. IL-18 is also an important factor in promoting tumor cell metastasis and angiogenesis.

Recombinant Mouse Interleukin-18 is a non-glycosylated protein monomer, containing 158 amino acids and having a molecular mass of 18.2 kDa.

Cat. No.:
RP2083AF

Alternate Names:
Interferon gamma-inducing factor, IL-1 gamma

AA Sequence:

MNFGRLHCTT	AVIRNINDQV	LFVDKRQPVF
EDMTDIDQSA	SEPQTRLIIY	MYKDSEVRGL
AVTLSVKDSK	MSTLSCKNKI	ISFEEMDPPE
NIDDIQSDLI	FFQKRVPGHN	KMEFESSLYE
GHFLACQKED	DAFKLILKKK	DENGDKSVMF
TLTNLHQS		

TECHNICAL INFO

Source:
E. coli

Physical Appearance:
Sterile Filtered white lyophilized (freeze-dried) powder.

Formulation:
10 mM sodium phosphate and mannitol (2:1 mannitol to protein ratio.), pH 8.0

Stability:
Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

Reconstitution:
Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at 0.1 mg/mL, which can be further diluted into other aqueous solutions.

Protein Content and Purity determined by:
- UV spectroscopy at 280 nm.
- RP-HPLC calibrated against a known standard.
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

Endotoxin Level:
Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.