Active Recombinant Human IL18

Cat. No. IL18-1237H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human IL-18 produced in Yeast is a single polypeptide chain containing 157 amino acids, and having a predicted molecular mass of approximately 18.0kDa.
Species	Human
Source	Yeast
ProteinLength	157 a.a.
Description	Interleukin 18 (IL-18) is a cytokine which identified as a costimulatory factor for production of interferon-γ (IFN-γ) in response to toxic shock and shares functional similarities with IL-12. IL-18 is synthesized as a precursor 24-kDa molecule without a signal peptide and must be cleaved to produce an active molecule. IL-1 converting enzyme (ICE, Caspase-1) cleaves pro-IL-18 at aspartic acid in the P1 position, producing the mature, bioactive peptide that is readily released from the cells. It is reported that IL-18 is produced from Kupffer cells, activated macrophages, keratinocytes, intestinal epithelial cells, osteoblasts, adrenal cortex cells and murine diencephalon. IFN-γ is produced by activated T or NK cells and plays critical roles in the defense against microbiral pathogens. IFN-γ activates macrophages and enhances NK activity and B cell maturation, proliferation and Ig secretion. IFN-γ also induces expression of MHC class I and II antigens and inhibits osteoclast activation. IL-18 acts on T helper type-1 (Th1) T cells and in combination with IL-12 strongly induces them to produce IFN-γ . Pleiotropic effects of IL-18 have also been reported, such as, enhancement production of IFN-γ and GM-CSF in peripheral blood

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	mononuclear cells, production of Th1 cytokines, IL-2, GM-CSF and IFN-γ in T cells, enhancement of Fas ligand expression by Th1 cells.
Form	Lyophilized from a 0.2μm filtered solution in 50mM NaAc, 2mM DTT and 1% sucrose, pH5.5.
Bio-activity	Induction of IFN-γ by PBMC cell in response to the recombinant human IL-18 was measured using human IFN-γ ELISA. IFN-γ producing activity of the sample cells can be varied depending on cell conditions. Optimal concentration for each application should be determined by each laboratory.
Endotoxin	≤1EU/μg, determined by the LAL method.
Purity	≥97%, as determined by SDS-PAGE and HPLC method.
Usage	FOR RESEARCH ONLY
Storage	Lyophilized samples are stable for greater than six months from date of receipt at -20 centigrade to -70 centigrade. The reconstituted samples can be stored under sterile conditions at 2-8 centigrade for one month or at -20 centigrade to -70 centigrade for three months without detectable loss of activity. Avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile PBS containing at least 0.1% human serum albumin or bovine serum albumin be added to the vial to prepare a stock solution of not less than 100μg/ml of the cytokine.

GENE INFORMATION

Gene Name	IL18 interleukin 18 [Homo sapiens (human)]

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Official Symbol	IL18
Synonyms	IGIF; IL-18; IL-1g; IL1F4; interleukin-18; IFN-gamma-inducing factor; IL-1 gamma; iboctadekin; interleukin 18 (interferon-gamma-inducing factor); interleukin-1 gamma
Gene ID	3606
mRNA Refseq	NM_001243211
Protein Refseq	NP_001230140
MIM	600953
UniProt ID	Q14116
Chromosome Location	11q22.2-q22.3
Pathway	African trypanosomiasis, organism-specific biosystem; Cellular roles of Anthrax toxin, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem
Function	cytokine activity; protein binding

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