

Active Recombinant Mouse Interleukin 18

Cat. No. II18-272M Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant mouse interleukin 1, beta was expressed in *E.coli*, encoding the matured Mouse IL-18 protein sequence (corresponding to 36-192 aa).

Species Mouse

Source E.coli

ProteinLength 36-192 a.a.

Description

Interleukin 18 (IL-18) is an 18-kDa 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 microbial 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.
Purity	Greater than 90% purity as confirmed on SDS-PAGE by Coomassie brilliant blue staining.
Activity	Induction of IFN- γ by mouse IL-18 receptor transfected KG-1 cell [human myelomonocyte; ATCC CCL246] in response to the recombinant mouse IL-18 was measured using human IFN- γ ELISA.
Formulation	Lyophilized in PBS containing 1% sucrose. Reconstitute in 2 mL of ice-cold distilled water on ice.
Storage	Lyophilized Mouse IL-18 is stable for 24 months from the date of manufacture when store at -20°C or below. After reconstitution, avoid repeated freezing and thawing. The IL-18 can be stored for 1 week at 4°C. For storage, prepare appropriate aliquots and freeze them at -80°C.

GENE INFORMATION

Gene Name	Il18 interleukin 18 [Mus musculus]
Synonyms	Il18; interleukin 18; Igif; Il-18; Il18; interleukin 18; IL-1 gamma; interleukin-18; interleukin-1 gamma; IFN-gamma-inducing factor; interferon-gamma-inducing factor
Gene ID	16173
mRNA Refseq	NM_008360
Protein Refseq	NP_032386

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UniProt ID	P70380
Chromosome Location	9F;9 29.0 cM
Pathway	Cytokine-cytokine receptor interaction; Cytosolic DNA-sensing pathway; NOD-like receptor signaling
Function	cytokine activity
Solution structure of human IL-18.	

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