

Recombinant human IL18

Catalog No: #AG0013

Orders: order@signalwayantibody.comSupport: tech@signalwayantibody.com

Description

Product Name	Recombinant human IL18
Host Species	E.coli
Purification	> 95% by Tris-Bis PAGE;> 95% by SEC-HPLC
Immunogen Description	Asn37-Ser193
Target Name	IL18
Other Names	Human IL-18, h-IL-18, rh-IL-18, recombinant IL-18, interleukin-18
Accession No.	Uniprot:Q14116Gene ID:3606
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GeneID	3606
Target Species	human
Calculated MW	18.1 KDa
Tag Info	additional amino acid free
Formulation	0.22 µm filtered solution of PBS, pH 7.4.
Storage	Aliquot and store at -80°C. Avoid repeated freeze/thaw cycles.

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. It is expressed as a 24 kDa precursor by endothelial and epithelial cells, keratinocytes, gamma P' T cells, and phagocytes. The precursor is activated intracellularly by Caspase-1 mediated proteolysis to release the 17 kDa mature cytokine. The precursor can also be released by necrotic cells for extracellular cleavage by multiple proteases.

IL-18 activation is induced by infection or tissue damage and contributes to disease pathology in chronic inflammation (1-3). IL-18 binds to the widely expressed

IL-18 R alpha which recruits IL-18 R beta to form the signaling receptor complex (4, 5). Its bioactivity is negatively regulated by interactions with IL-18 binding proteins and virally encoded IL-18BP homologs (6). In the presence of IL-12 or IL-15, IL-18 enhances anti-viral Th1 immune responses by inducing IFN-gamma production and the cytolytic activity of CD8+ T cells and NK cells (7, 8). In the absence of IL-12 or IL-15, however, IL-18 promotes production of the Th2 cytokines IL-4 and IL-13 by CD4+ T cells and basophils (9, 10). In the presence of IL-1 beta or IL-23, IL-18 induces the antigen-independent production of IL-17 by gamma P' T cells and CD4+ T cells (11).

IL-18 also promotes myeloid dendritic cell maturation and triggers neutrophil respiratory burst (12, 13). In cancer, IL-18 exhibits diverse activities including enhancing anti-tumor immunity, inhibiting or promoting angiogenesis, and promoting tumor cell metastasis (14). Mature human IL-18 shares approximately 63% amino acid sequence identity with mouse and rat IL-18 (15). Alternative splicing in human ovarian cancer generates an isoform that is resistant to Caspase-1 activation (16). A cell surface form can be expressed on M-CSF induced macrophages and released in response to bacterial endotoxin (17).

Note: This product is for in vitro research use only