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Human recombinant IL-18 protein, GMP

Catalog Number: PROTQ14116-3

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Overview

Product Name	Human recombinant IL-18 protein, GMP
Description	Interleukin-18 (IL-18) belongs to the IL-1 superfamily and is constitutively produced by macrophages, dendritic cells (DCs) and other cells. IL-18 binds to the receptor of IL-18 (IL-18R) and initiate the recruitment and heterodimerization of the IL-18RAcP, leading to downstream activation of NF-kappaB. After stimulation with IL-18, multiple cytokines including IFN-gamma, IL-13, IL-4, IL-8, and GM-CSF and both Th1 and Th2 lymphokines could be produced by different cells. As an immunoregulaory cytokine, IL-18 can promote development of T helper 1 (Th1) cells, which maximizes the production of IFN by synergistically stimulating to mature Th1 effectors in combination with IL-12. On the contrary, it inhibits the production of the anti-inflammatory cytokine IL-10. In addition, IL-18 exhibits multiple proinflammatory functions, such as increases in cell adhesion molecules, nitric oxide synthesis, and chemokine production.
Size	100ug,1mg
Tag	Tag Free
Form	Lyophilized
Source	Escherichia coli
Formulation	Lyophilized from a 0.2 um filtered solution of PBS, pH 7.4.

Storage

Lyophilized protein should be stored at -20°C for 1 year. Upon reconstitution, store at 2°C to 8°C for up to 1 week. Further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA, 10%FBS, 5%HSA or 5% trehalose solution), protein aliquots should be stored at -20°C or -80°C for 3-6 months. Avoid repeated freeze/thaw cycles.

Purity

>97% as determined by SDS-PAGE analysis.

Molecular weight

The protein has a calculated MW of 18.2 kDa. The protein migrates as 15 kDa under reducing condition (SDS-PAGE analysis).

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Activity

Measure by its ability to induce IFN gamma secretion in KG-1 cells. The ED_{50} for this effect is <6 ng/mL.

Endotoxin

<0.05 EU per 1 ug of the protein by the LAL method.

Amino Acid Sequence

YFGKLESKLSVIRNLNDQVLFIDQGNRPLFEDMTDSDCRDNAPRTIFIISMYKDSQPRGMAVTISVKCEKISTLSCENKIISFKEMNPPDNIKDTKSDIIFFQ
RSVPGHDNKMQFESSSYEGYFLACEKERDLFKLILKKEDELGDRSIMFTVQNED

Reconstitution

Centrifuge at 3000 rpm for 5 mins before opening. It is recommended to reconstitute the lyophilized protein in sterile H_2O to a concentration not less than 0.5 mg/mL and incubate the stock solution at RT for at least 20 min to ensure sufficient re-dissolved.

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