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Human recombinant IL-18 (Interleukin-18) protein, AF

Catalog Number: PROTQ14116-2

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Overview

Product Name	Human recombinant IL-18 (Interleukin-18) protein, AF
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	5ug,20ug,100ug
Tag	Tag Free
Form	Lyophilized
Source	Escherichia coli
Formulation	The protein was lyophilized from a 0.2 um filtered solution containing 1X PBS, pH 7.4. If you have any concerns or special requirements, please confirm with us.

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

>95% as determined by SDS-PAGE.

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

<0.1 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 100 ug/mL and incubate the stock solution at room temperature for at least 20 mins to ensure sufficient re-dissolved. Do Not Vortex! Vigorous shaking may impair the biological activity of the protein.

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Usage

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For Research Use Only. Not for use in diagnostic procedures.