

## Recombinant Human IL18 Protein (Avi,His Tag)

**Catalog Number:** PDEH100869

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

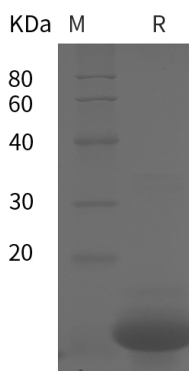
### Description

<b>Species</b>	Human
<b>Source</b>	E.coli-derived Human IL18 N terminal protein Tyr37-Lys115, with an C-terminal Avi & His
<b>Calculated MW</b>	8.6 kDa
<b>Observed MW</b>	12 kDa
<b>Accession</b>	Q14116
<b>Bio-activity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 95% as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 10 EU/mg of the protein as determined by the LAL method
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
<b>Reconstitution</b>	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

### Data



SDS-PAGE analysis of Human IL18 proteins, 2 µg/lane of Recombinant Human IL18 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 12 kDa.

### Background

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Rev. V1.5

Interleukin-18 (IL-18, also known as interferon-gamma inducing factor) is a proinflammatory cytokine that belongs to the IL-1 superfamily and is produced by macrophages and other cells. This cytokine can induce the IFN-gamma production of T cells. The combination of IL-18 and IL-12 has been shown to inhibit IL-4 dependent IgE and IgG1 production, and enhance IgG2a production of B cells. IL-18 binding protein (IL-18BP) can specifically interact with this cytokine, and thus negatively regulate its biological activity. IL-18 is an IL-1-like cytokine that requires cleavage with caspase-1 to become active, was found to increase IgE production in a CD4+ T cells-, IL-4-, and STAT6-dependent fashion. IL-18 and T cell receptor-mediated stimulation could induce naive CD4+ T cells to develop into IL-4-producing cells in vitro. Thus, caspase-1 and IL-18 may be critical in regulation of IgE production in vivo, providing a potential therapeutic target for allergic disorders. IL-18 production in primary synovial cultures and purified synovial fibroblasts was, in turn, upregulated by TNF- $\alpha$ , and IL-1 $\beta$ , suggesting that monokine expression can feed back to promote Th1 cell development in synovial membrane. Besides, synergistic combinations of IL-18, IL-12, and IL-15 may be of importance in sustaining both Th1 responses and monokine production in RA.