## **Recombinant Mouse Interleukin-18/IL-18 Protein (His** Tag)

Catalog Number: PKSM041079



| Description    |  |
|----------------|--|
| Species        | Mouse  |
| Mol_Mass       | 19.1 kDa   |
| Accession      | P70380   |
| Bio-activity   | Measure by its ability to induce IFN gamma secretion in KG-1 cells. The $ED_{50}$ for this |
|                | effect is $<0.5 \ \mu g/mL$ .  |
| Properties     |  |
| Purity         | > 98 % as determined by reducing SDS-PAGE.   |
| Endotoxin      | < 0.1 EU per µg of the protein as determined by the LAL method.                            |
| Storage        | 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 $< -20^{\circ}C$ for 3 months.                         |
| Shipping       | This product is provided as lyophilized powder which is shipped with ice packs.            |
| Formulation    | Lyophilized from sterile PBS,pH 8.0.   |
|                | Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants           |
|                | before lyophilization.   |
|                | Please refer to the specific buffer information in the printed manual.                     |
| Reconstitution | Please refer to the printed manual for detailed information.                               |
| Data           |  |
| kDa            |  |
|                |  |
| 75-<br>63-     |  |
| 48-            |  |
| 35-            |  |
| 25-            |  |
|                |  |

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

> 98 % as determined by reducing SDS-PAGE.

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## Background

Interleukin-18 (IL-18) is a protein which belongs to the IL-1 family. It is expressed as a 24 kDa precursor by endothelial and epithelial cells, keratinocytes, gamma & T cells, and phagocytes. Mature mouse IL-18 shares 63% and 91% amino acid sequence identity with mouse and rat IL-18, respectively. IL-18 binds to the widely expressed IL-18 R alpha which recruits IL-18 R beta to form the signaling receptor complex. Its bioactivity is negatively regulated by interactions with I L-18 binding proteins and virally encoded IL-18BP homologs. It augments natural killer cell activity in spleen cells and stimulates interferon gamma production in T-helper type I cells. In the presence of IL-12 or IL-15, IL-18 enhances antiviral Th1 immune responses by inducing IFN-gamma production and the cytolytic activity of CD8+ T cells and NK cells. 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.

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