

## Recombinant Rat IL-18 Protein (Sumo Tag)

Catalog Number: PDER100259

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

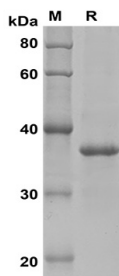
### Description

Species	Rat
Source	E.coli-derived Rat IL-18 protein His37-Ser194, with an N-terminal Sumo
Calculated MW	33 kDa
Observed MW	37 kDa
Accession	P97636
Bio-activity	Not validated for activity

### Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 10 EU/mg 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°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	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 Rat IL-18 proteins, 2µg/lane of Recombinant Rat IL-18 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 37 KD

### 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  $\delta$  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 IL-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 anti-viral 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.