

## Recombinant Rat Interleukin-18 (rr IL-18)

**Synonyms:** Interferon-gamma-inducing factor, IGIF, IL-1g, IL1F4, MGC12320, IFN-gamma-inducing factor, Interleukin-1 gamma, IL-1 gamma, Iboctadekin.

**Introduction:** IL-18 is a proinflammatory cytokine. This cytokine can induce the IFN-gamma production of T cells. The combination of this cytokine and IL12 has been shown to inhibit IL4 dependent IgE and IgG1 production and enhance IgG2a production of B cells. IL-18 binding protein (IL18BP) can specifically interact with this cytokine and thus negatively regulate its biological activity.

**Description:** Recombinant rat IL-18 produced in E.Coli is a single, non-glycosylated polypeptide chain containing 158 amino acids and having a molecular mass of 18.26 kDa. The rat IL-18 purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

**Physical Appearance:** Sterile filtered white lyophilized (freeze-dried) powder.

**Formulation:** Lyophilized from a concentrated (1 mg/ml) solution in water containing 0.4x PBS pH=7.2. The aliquotes of 1µg contain Trehalose 5% (w/vol) for better recovery

**Solubility:** It is recommended to reconstitute the lyophilized rr IL-18 in sterile water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rr IL-18 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rr IL-18 should be stored for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

**Purity:** Greater than 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

**Amino Acid Sequence:** The sequence of the first five N-terminal amino acids was determined and was found to be His-Phe-Gly-Arg-Leu.

**Biological Activity:** The ED50 as determined by the dose-dependant stimulation of IFN-gamma by murine lymph node cells ( $4 \times 10^5$  cells/well) co-stimulated with sub optimal dose of ConA (0.75ug/ml) is 12 ng/ml. The medium was RPMI containing 10% FCS and 50µM 2-ME.

**Protein content:** Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbcency value of 0.213 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using standard solution of IL-18 as a Reference Standard.

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<i>small</i>	5 µg	Cat.N°	13340180
<i>medium</i>	25 µg	Cat.N°	13340184
<i>large</i>	100 µg	Cat.N°	13340186

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