

## Recombinant Rat Interleukin 12b

**Cat. No.** II12b-86R    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Rat Interleukin-12 produced in <i>Sf9</i> insect cells is a glycosylated disulfide linked heterodimeric polypeptide containing 503 amino acids and having a molecular weight of 70 kDa comprised of disulfide-bonded 35 kDa (p35) and 40 kDa (p40) subunits. The IL-12 is purified by proprietary chromatographic techniques.
<b>Species</b>	Rat
<b>Source</b>	Insect Cells
<b>Description</b>	IL-12 is a heterodimeric cytokine that stimulates the production of interferon gamma from T-cells and natural killer cells, and also induces differentiation of Th1 helper cells. It is an initiator of cell-mediated immunity.
<b>Amino Acid Sequence</b>	The sequence of the first five N-terminal amino acids was determined and found to be Arg-Val-Ile-Pro-Val at the p35 subunit and Met-Thr-Glu-Leu-Glu at the p40 subunit.
<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Purity</b>	Greater than 95.8% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
<b>Formulation</b>	The protein (1 mg/ml) was lyophilized with no additives.
<b>Solubility</b>	It is recommended to reconstitute the lyophilized Interleukin 12 in sterile 18 MΩ-cm H <sub>2</sub> O not less than 100 g/ml, which can then be further diluted to other aqueous

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 45-1 Ramsey Road, Shirley, NY 11967, USA

solutions.

**Specific Activity**

The ED<sub>50</sub> was determined by the stimulation of IFN-gamma production by murine splenocytes co-stimulated with IL-12 and was found to be < 0.1 ng/ml, corresponding to a specific activity of >1 x 10<sup>7</sup>.

**Stability**

Lyophilized Interleukin-12 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL12 should be stored at 4°C between 2-7 days and 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.

## GENE INFORMATION

**Gene Name**

Il12b interleukin 12b [ *Rattus norvegicus* ]

**Synonyms**

Il12b; interleukin 12b; Il12; interleukin-12 p40

**Gene ID**

64546

**mRNA Refseq**

NM\_022611

**Protein Refseq**

NP\_072133

**UniProt ID**

Q62712

**Chromosome Location**

10q21

**Pathway**

Allograft rejection; Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway; RIG-I-like receptor signaling pathway; Toll-like receptor signaling pathway;

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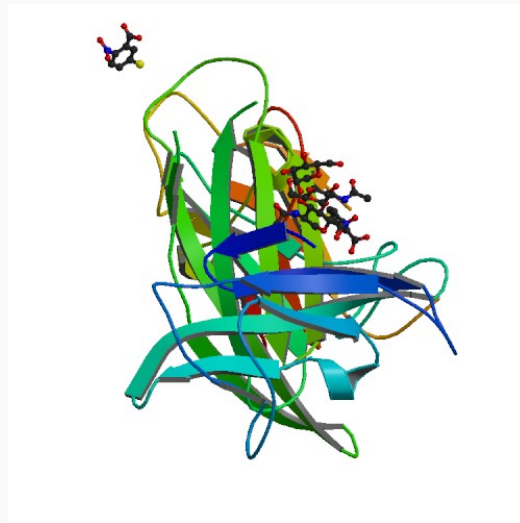
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Type I diabetes mellitus

**Function**

cytokine activity; contributes\_to cytokine activity; cytokine receptor activity; contributes\_to growth factor activity; interleukin-12 alpha subunit binding; protein binding; protein homodimerization activity

**PDB rendering based on 1f42.**



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