

## Recombinant Rat Interleukin-3 beta

### Information

<b>Gene ID</b>	24495
<b>Accession #</b>	P97688
<b>Alternate Names</b>	Hematopoietic Growth Factor, MCGF, Multipotential Colony-stimulating Factor, P-cell-stimulating Factor.
<b>Source</b>	Escherichia coli.
<b>M.Wt</b>	Approximately 16.3 kDa, a single non-glycosylated polypeptide chain containing 144 amino acids.
<b>AA Sequence</b>	MISDRGSDAH HLLRTLDCRT IALEILVKLP YPQVSGLNNS DDKANLRNST LRRVNLDEFL KSQEEFDSQD TTDIKSKLQK LKCCIPAAAS DSVLPGVYNK DLDDFKKKLR FYVIHLKDLQ PVSVSRRPPQP TSSSDNFRPM TVEC
<b>Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
<b>Reconstitution</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Biological Activity</b>	Fully biologically active when compared to standard. The ED as determined by a cell proliferation assay using murine MC-9 cells is less than 10 ng/ml, corresponding to a specific activity of > 1.0 × 10 IU/mg.
<b>Shipping Condition</b>	Gel pack.
<b>Handling</b>	Centrifuge the vial prior to opening.
<b>Usage</b>	For Research Use Only! Not to be used in humans.

### Components and Storage

Components	5µg	100µg	500µg
Recombinant Rat Interleukin-3 beta	5µg	100µg	500µg

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- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

## Quality Control

Purity	> 95 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rRtlL-3β as determined by LAL method.

## Description

Interleukin-3 (IL-3) is a type of biological signal (cytokine) which is encoded by the IL-3 gene located on chromosome 5 and produced primarily by activated T cells beside human thymic epithelial cells, activated murine mast cells, murine keratinocytes and neurons/astrocytes. It exerts its biological activities through binding to Interleukin-3 receptors included  $\alpha$  and  $\beta$  subunits, but sequence analysis revealed a number of features indicative of the presence of only one  $\beta$ -subunit in the rat. Interleukin-3 acts in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. Furthermore, rat and human IL-3 share low homology and have not cross species activity.

## Reference

1. Yang YC, Ciarletta AB, Temple PA, et al. 1986. Cell. 47:3-10
2. Otsuka T, Miyajima A, Brown N, et al. 1988. J Immunol. 140:2288-95
3. Cohen DR, Hapel AJ, Young IG. 1986. Nucleic Acids Res. 14:3641-58
4. Esandi MC, van Someren GD, Bout A, et al. 1998. Gene Ther. 5:778-88
5. Dorssers L, Burger H, Bot F, et al. 1987. Gene. 55:115-24.

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