

## IL-3 $\beta$ , Rat

**Cat. No.:** Z03165-10

**Size:** 10.0 ug

**Synonyms:** MCGF (Mast cell growth factor), Multi-CSF, HCGF, P-cell stimulation factor

### Description:

Interleukin-3 (IL-3) is a pleiotropic cytokine belonging to the interleukin family. IL-3 shares similarities with Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF) and IL-5: they all have a four-helix bundle structure, are located on the same chromosomes in both human and mouse, are produced by activated T cells, and share receptors. The IL-3/IL-5/GM-CSF receptor family members are all heterodimeric, composed of a receptor-specific  $\alpha$  chain and a common  $\beta$  chain. IL-3 is also called multi-colony stimulating factor since it stimulates the development and colony formation of multiple lineages of hematopoietic cells by activating intracellular pathways such as Ras-Raf-ERK and JAK/STAT. IL-3 inhibits apoptosis and promotes cell survival by targeting the anti-apoptotic bcl-2 gene family.

Recombinant rat Interleukin-3 beta (rrIL-3 beta) produced in *E. coli* is a single non-glycosylated polypeptide chain containing of 144 amino acids. A fully biologically active molecule, rrIL-3 beta has a molecular mass of 16.3 kDa analyzed by non-reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

### Amino Acid Sequence:

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00001 MISDRGSDAH HLLRTLDCRT IALEILVKLP YPQVSGLNNS
00041 DDKANLRNST LRRVNLDEFL KSQEFPDSQD TTDIKSKLQK
00081 LKCCIPAAAS DSVLPGVYNK DLDDFKKKLR FYVIHLKDLQ
00121 PVSVSRPPQP TSSSDNFRPM TVEC
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**Source:** *E. coli*

**Species:** Rat

**Biological Activity:** ED<sub>50</sub> < 5 ng/mL, measured by a cell proliferation assay using NFS-60 cells, corresponding to a specific activity of > 2 × 10<sup>5</sup> units/mg.

**Molecular Weight:** 16.3 kDa, observed by non-reducing SDS-PAGE.

**Formulation:** Lyophilized after extensive dialysis against PBS.

**Reconstitution:** Reconstituted in ddH<sub>2</sub>O at 100  $\mu$ g/mL.

**Purity:** > 95% as analyzed by SDS-PAGE and HPLC.

**Endotoxin Level:** < 0.2 EU/ $\mu$ g, determined by LAL method.

**Storage:** Lyophilized recombinant rat Interleukin-3 beta (rrIL-3 beta) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rrIL-3 beta remains stable up to 2 weeks at 4°C or up to 3 months at -20°C.