

# PRODUCT DATA SHEET



Bioworld Technology, Inc.

## Recombinant IL-3 $\beta$ , Rat

Catalog Number: BK0105-50 $\mu$ g

Source: Escherichia coli.

Quantity: 50 $\mu$ g

### 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.

### Molecular Weight:

16.3 kDa, observed by non-reducing SDS-PAGE.

### Purity:

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

### Biological Activity:

ED50 < 5 ng/mL, measured by a cell proliferation assay using NFS-60 cells, corresponding to a specific activity of > 2  $\times$  10<sup>5</sup> units/mg.

### Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

### Formulation:

Lyophilized after extensive dialysis against PBS.

### AA Sequence:

MISDRGSDAHLLRRLD-  
CRTIALEILVKLPYPQVSGLNNSDDKANLRNSTL  
RRVNLDEFKLSQEEFDSQDITDIK-  
SKLQKLKCCIPAAASDSVLPGVYN-  
KDLDDFKKLRFYVIHLKDLQPVSVSRPPQPTSS  
SDNFRPMTVEC

### Endotoxin:

< 0.2 EU/ $\mu$ g, determined by LAL method.

### Reconstitution:

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

### Storage:

Lyophilized recombinant rat Interleukin-3 beta (rrIL-3 beta) remains stable up to 6 months at -80  $^{\circ}$ C from date of receipt. Upon reconstitution, rrIL-3 beta remains stable up to 2 weeks at 4  $^{\circ}$ C or up to 3 months at -20  $^{\circ}$ C.

### Usage:

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