



## Interleukin-4, rat recombinant (rrIL-4)

**Catalog No:** 87369  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** BCGF, BCDF, B cell stimulating factor, BSF-1, Lymphocyte stimulatory factor 1, IL-4, MGC79402, Binetrakin, Pitrakinra

### Background

IL4 is a pleiotropic cytokine produced by activated T cells. IL4 is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play a central role in mediating the immune regulatory signal of this cytokine. This gene, IL3, IL5, IL13, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL13. IL4, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported.

### Description

Interleukin-4 rat recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 126 amino acids and having a molecular mass of 14 kDa. IL-4 is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

Lyophilized from a concentrated (1 mg/ml) solution in water containing no additives.

### Solubility

It is recommended to reconstitute the lyophilized Interleukin-4 in sterile 18 M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilized Interleukin-4, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL4 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.

### Purity

Greater than 98.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

### Amino Acid Sequence

MHGCNDSPLR EIINTLNQVT EKGTPCTEMF VPDVLTATRN TTENELICRA SRVLRKFYFP RDVPPCLKNK SGVLGELRKL  
CRGVSGLSNL RSCTVNESTL TTLKDFLESL KSILRGKYLQ SCTSMS

### Activity

Determined by its ability to suppress LPS-induced TNF-alpha and MIP-2 production in mouse splenocytes.

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### Usage

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