

# rHuIL-4

## Recombinant Human Interleukin-4 from *E.Coli*

Product	Cat#	Package size
Recombinant Human Interleukin-4 from <i>E.Coli</i>	C6024.0005	5µg
Recombinant Human Interleukin-4 from <i>E.Coli</i>	C6024.0020	20µg

**Synonyms:** BCGF, BCDF, B cell stimulating factor, BSF-1, Lymphocyte stimulatory factor 1, IL-4, MGC79402, Binetrakin, Pitrakinra.

### Product description

Recombinant human IL-4 from *E.Coli* is a single, non-glycosylated polypeptide of 130 amino acids and a molecular mass of 15 kDa.

IL-4 is a pleiotropic cytokine produced by activated T cells. IL-4 is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL-13, which may contribute to many overlapping functions of IL-4 and IL-13.

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. IL-4, IL-3, IL-5, IL-13, and CSF2 form a cytokine gene cluster on chromosome 5q, with the IL-4 gene particularly close to IL-13. IL-4, IL-3 and IL-5 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.

**Source:** *Escherichia coli*

### Biological activity

The ED50 as determined by the dose-dependent stimulation of TF-1 cells is <0.2ng/mL, corresponding to a Specific Activity of 5,000,000 IU/mg.

**Purity:** Greater than 97% by SDS-PAGE and HPLC analysis.

### Amino acid sequence

MHKCDITLQE IIKTLNSLTE QKTLCTELTV TDIFAASKNT TEKETFCRAA TVLRQFYSHH EKDTRCLGAT AQQFHRHKQL IRFLKRLDRN LWGLAGLNSC PVKEANQSTL ENFLERLTKI MREKYSKCSS.

**Formulation:** IL-4 was lyophilized from a 0.2µm filtered concentrated (1mg/mL) solution in PBS, pH7.4.

### Solubility / Reconstitution

It is recommended to briefly centrifuge the vial prior to opening to bring the contents to the bottom. Reconstitute the lyophilised rHuIL-4 in sterile water not less than 100µg/mL, which can then be further diluted to other aqueous solutions.

### Stability

Lyophilised rHuIL-4 although stable at room temperature for 3 weeks, should be stored at -20°C. Reconstituted rHuIL-4 is best stored refrigerated at +2°C to +8°C between 2-7 days and at -20°C for long term storage. For long term storage it is recommended to add a carrier protein (e.g., 0.1% HSA or BSA).

**Please prevent from repeated freeze-thaw cycles.**

### Protein Content

Protein quantitation was carried out by two independent methods

1. UV spectroscopy at 280 nm using the absorbency value of 0.594 as the extinction coefficient for a 0.1% (1mg/mL) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a standard solution of IL-4 as a reference standard.

### Usage

This product is for research/laboratory usage only. It may not be used as drug, agricultural or pesticidal product, food additive or household chemical.