

Recombinant Human Interleukin-4 (rh IL-4)

Synonyms: BCGF, BCDF, B cell stimulating factor, BSF-1, Lymphocyte stimulatory factor 1

Introduction: rh 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 this cytokine 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. This gene, IL-3, IL-5, IL-13 and GM-CSF form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL-13. IL-4, IL-13 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.

Description: Recombinant human IL-4 produced in *E.Coli* is a single, non-glycosylated polypeptide chain containing 130 amino acids and having a molecular mass of 15 kDa. The rh IL-4 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: 0.22 µm filtered solution in 25 mM sodium phosphate, 200 mM NaCl, pH 6.5
The aliquots of 1µg and 2µg contain Trehalose 5% (w/vol) for better recovery

Solubility: It is recommended to reconstitute the lyophilized rh IL-4 in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh IL-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh IL-4 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 95.0% as determined by SDS-PAGE.

Endotoxicity: The endotoxin level is less than 1 EU / µg determined by LAL method

Amino acid sequence: MHKCDITLQE IIKTLNSLTE QKTLCTELTV TDIFAASKNT TEKETFCAA
TVLRQFYSHH EKDTRCLGAT AQQFHRHKQLIRFLKRLDRN LWGLAGLNSC PVKEANQSTL ENFLERLKTI
MREKYSKCSS

Biological Activity: The specific activity is > 23.0 x 10⁶ IU/mg.

This material is offered for **research only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 µg	Cat.N°	11340042
<i>medium</i>	10 µg	Cat.N°	11340043
<i>large</i>	50 µg	Cat.N°	11340045
<i>x-large</i>	250 µg	Cat.N°	11340047
<i>xx-large</i>	1000 µg	Cat.N°	11340048

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