

Recombinant Rat Interleukin-4 (rr IL-4)

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

Introduction: IL-4 is a pleiotropic cytokine that regulates diverse T and B cell responses including cell proliferation, survival and gene expression. Produced by mast cells, T cells and bone marrow stromal cells, IL-4 regulates the differentiation of naive CD4+ T cells into helper Th2 cells, characterized by their cytokine-secretion profile that includes secretion of IL-4, IL-5, IL-6, IL-10, and IL-13, which favor a humoral immune response. Another dominant function of IL-4 is the regulation of immunoglobulin class switching to the IgG1 and IgE isotypes. Excessive IL-4 production by Th2 cells has been associated with elevated IgE production and allergy.

Description: Recombinant Rat IL-4 produced in *E. Coli* is a single, non-glycosylated, polypeptide chain containing 126 amino acids and having a molecular mass of 14.1 kDa. The rr IL-4 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

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

Formulation: Lyophilized from a 0.22 µm filtered solution in PBS pH 7.1
The aliquotes of 1 µg and 2 µg contain Trehalose 5% (w/vol) for better recovery

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

Stability: Lyophilized rr IL-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rr 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 / silver stain.

Amino Acid Sequence: MHGCNDSPLR EIINTLNQVT EKGTPCTEMF VPDVLTATRN TTENELICRA
SRVLRKFYFP RDVPPCLKNK SGVLGELRKL CRGVSGLSL RSCVTNESTL TTLKDFLESL KSILRGKYLQ
SCTSMS

Biological Activity: tested by its ability to induce rat IL-4R induced STAT activation in transfected Ba/F3 cells.

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

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°	13340042
<i>medium</i>	10 µg	Cat.N°	13340043
<i>large</i>	50 µg	Cat.N°	13340045
<i>x-large</i>	250µg	Cat.N°	13340047
<i>xx-large</i>	1000µg	Cat.N°	13340048

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