

Active GMP Recombinant Human IL4 Protein

Cat. No. IL4-01HG Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human IL4 protein, was expressed in CHO-K1 cell-derived in an animal component free process under cGMP guidelines.
Species	Human
Source	CHO
Description	The protein encoded by this gene is a pleiotropic cytokine produced by activated T cells. This cytokine 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. This gene, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome. IL4 is considered an important cytokine for tissue repair, counterbalancing the effects of proinflammatory type 1 cytokines, however, it also promotes allergic airway inflammation. Moreover, IL-4, a type 2 cytokine, mediates and regulates a variety of human host responses such as allergic, anti-parasitic, wound healing, and acute inflammation. This cytokine has been reported to promote resolution of neutrophil-mediated acute lung injury. In an allergic response, IL-4 has an essential role in the production of allergen-specific immunoglobulin (Ig) E. This pro-inflammatory cytokine has been observed to be increased in COVID-19 (Coronavirus disease 2019) patients, but is not necessarily

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associated with severe COVID-19 pathology. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported.

Form	Lyophilized powder
Endotoxin	<20 EU/mg
Bio-activity	>5.0 x 10 ⁶ IU/mg
Purity	>95.0% by high performance liquid chromatography (SEC-HPLC) and SDS-PAGE.
Storage Buffer	10mM Phosphate-Buffered Saline (pH 7.2)
Storage	Stable storage at 4°C for 7-10 days; for long-term storage, please store at -20°C after dispensing.
Sterility	Sterility
Instructions	It is recommended that lyophilized GMP rhIL4 be dissolved in water for injection or sterilized ultrapure water at a concentration of not less than 100 µg/ml, pending further dilution to working concentration.

GENE INFORMATION

Gene Name	IL4 interleukin 4 [Homo sapiens (human)]
Official Symbol	IL4
Synonyms	BSF1; IL-4; BCGF1; BSF-1; BCGF-1
Gene ID	3565

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mRNA Refseq	NM_000589.4
Protein Refseq	NP_000580.1
UniProt ID	P05112
MIM	47780

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