Recombinant Human Interleukin 4

Cat. No. IL4-59H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Interleukin-4 produced in*CHO*is a single, non-glycosylated polypeptide chain containing 129 amino acids and having a molecular mass of 14 kDa, the glycosilation of IL-4 migrates as 18 kDa on SDS-PAGE. The IL-4 is purified by proprietary chromatographic techniques.
Species	Human
Source	CHO
Description	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.
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Pro-Gly-Gln-Thr.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.

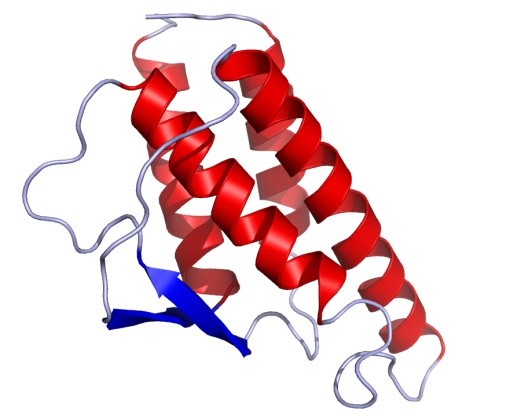
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Purity	Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	Lyophilized from a Phosphate- Buffered Saline (pH 7.4).
Solubility	It is recommended to reconstitute the lyophilized Interleukin-4 in sterile 18MΩ-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.
Biological Activity	Measured in a cell proliferation assay using TF-1 cells. The ED50 for this effect is 0.05-0.2 ng/ml.
Storage	Lyophilized Interleukin-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18℃. Upon reconstitution IL4 should be stored at 4℃ between 2-7 days and for future use below -18℃. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	IL4 interleukin 4 [Homo sapiens]
Synonyms	IL4; interleukin 4; BSF1; IL-4; BCGF1; BCGF-1; MGC79402; B cell growth factor 1; B_cell stimulatory factor 1; lymphocyte stimulatory factor 1; Lymphocyte stimulatory factor 1; B-cell stimulatory factor 1; Pitrakinra; Binetrakin; BSF-1
Gene ID	3565
mRNA Refseq	NM_000589
Protein Refseq	NP_000580

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MIM	147780
UniProt ID	P05112
Chromosome Location	5q31.1
Pathway	T cell receptor signaling pathway; Jak-STAT signaling pathway; Fc epsilon RI signaling pathway; Cytokine-cytokine receptor interaction; Autoimmune thyroid disease; Allograft rejection; Asthma; Hematopoietic cell lineage
Function	cytokine activity; growth factor activity; protein binding; interleukin-4 receptor binding
Crystal structure of human IL-4 (2INT)	

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