

Recombinant Porcine Interleukin 4

Cat. No. IL4-84P **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Porcine IL-4 produced in <i>E. Coli</i> is a single, non-glycosylated polypeptide chain containing 110 amino acids and having a molecular mass of 12615 Dalton. The IL-4 is purified by proprietary chromatographic techniques.
Species	Pig
Source	E.coli
Description	IL4 is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to 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.
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Met-His-Ly-Lys-Asp.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Formulation	Lyophilized from a concentrated (1 mg/ml) solution in water containing no additives.

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Solubility	It is recommended to reconstitute the lyophilized Interleikin-4 in sterile 18 MΩ-cm H ₂ O not less than 100 g/ml, which can then be further diluted to other aqueous solutions.
Specific Activity	The ED50 range= 1 to 4ng/ml. The biological activity is determined by measuring the dose dependent proliferation of human TF-1 cells. A concentration range of 0.1 to 10.0ng/ml is effective for most in vitro applications.
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.218 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.
Stability	Lyophilized Interleukin-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL4 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	IL4 interleukin 4 [<i>Sus scrofa</i>]
Synonyms	interleukin 4; IL4
Gene ID	397225
mRNA Refseq	NM_214123
Protein Refseq	NP_999288

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UniProt ID	Q04745
Chromosome Location	2
Pathway	Allograft rejection; Asthma; Autoimmune thyroid disease; Cytokine-cytokine receptor interaction; Fc epsilon RI signaling pathway; Hematopoietic cell lineage; Jak-STAT signaling pathway; T cell receptor signaling pathway

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