

Recombinant Porcine Interleukin-1 alpha

Cat. No. IL1α-81P **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Porcine Interleukin-1 produced in <i>E. Coli</i> is single, a non-glycosylated, Polypeptide chain containing 158 amino acids and having a molecular mass of 18076 Dalton. The IL-1 is purified by proprietary chromatographic techniques.
Species	Pig
Source	E.coli
Description	Interleukin-1 alpha is a proinflammatory cytokine produced by a wide variety of cell types, including macrophages, osteoblasts, monocytes and hepatocytes. Circulating levels of are normally low and only rise after stimulation by agents such as those produced by inflammation, infection or microbial endotoxins. IL-1 alpha possesses a wide variety of biological activities and exerts its effects by binding to specific cell surface receptors.
Amino Acid Sequence	The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Ala-Thr-Tyr-Ser.
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	The protein was lyophilized from a concentrated (1 mg/ml) sterile solution containing no additives.

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Solubility	It is recommended to reconstitute the lyophilized Interleukin-1 alpha in sterile 18 MΩ-cm H ₂ O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.
Specific Activity	The ED ₅₀ as determined by the dose-dependant stimulation of D10S cells is < 0.03 ng/ml.
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm using the absorbency value of 0.669 as the extinction coefficient for a 0.1% (1 mg/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-1 as a Reference Standard.
Stability	Lyophilized Interleukin-1 alpha although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL1 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.
Pathways	Apoptosis; Cytokine-cytokine receptor interaction; Graft-versus-host disease; Hematopoietic cell lineage; Leishmaniasis; MAPK signaling pathway; Prion diseases; Type I diabetes mellitus

GENE INFORMATION

Gene Name	IL1A interleukin 1, alpha [<i>Sus scrofa</i>]
Synonyms	IL1A; interleukin 1, alpha; IL-1alpha; interleukin-1 alpha; IL-1 alpha; interleukin 1-alpha

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Gene ID	397094
mRNA Refseq	NM_214029
Protein Refseq	NP_999194
UniProt ID	P18430
Chromosome Location	3q12-q13; 3
PDB rendering based on 2ila	

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