

Active GMP Recombinant Human IL9 protein

Cat. No. IL9-4324HG Lot. No. (See product label)

SPECIFICATION

Product Overview

Recombinant Human IL9 was produced in E. coli using non-animal reagents in an animal-free facility under cGMP guidelines.

Species

Human

Source

E.coli

Description

Interleukin-9 (IL-9) is encoded by the IL9 gene and produced by T-cells and specifically by CD4+ helper cells. IL-9 was originally identified as a cytokine found in the conditioned medium of a human T cell leukemia virus type I (HTLV1) transformed T cell line. It functions through the IL-9 receptor, which activates different signal transducer and activator (STAT) proteins and thus connects this cytokine to various biological processes. IL-9 can support the growth of IL-2 independent and IL-4 independent helper T-cells. Human IL-9 has approximately 56 % amino acid sequence identity with murine IL-9. The gene encoding this cytokine has been identified as a candidate gene for asthma. Genetic studies on a mouse model of asthma demonstrated that this cytokine is a determining factor in the pathogenesis of bronchial hyper-responsiveness.

Form

Lyophilized from a 0.2 µ filtered concentrated solution in PBS, pH 7.4.

Bio-activity

Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using human MO7e cells is less than 0.2 ng/ml, corresponding to a specific activity of $> 5.0 \times 10^6$ IU/mg.

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Molecular Mass	Approximately 14.1 kDa, a single non-glycosylated polypeptide chain containing 126 amino acids.
AA Sequence	QGCPTLAGILDINFLINKMQEDPASKCHCSANVTSCCLCLGIPSDNCTRPCFSERLSQ MTNTTMQTRYPLIFSRVKKSVEVLKNNKCPYFSCEQPCNQTTAGNALTFKLSLLEIF QKEKMRGMRGKI
Endotoxin	Less than 1 EU/g of rHuIL-9 as determined by LAL method.
Purity	> 95 % by SDS-PAGE and HPLC analyses.
Storage	This lyophilized preparation is stable at 2-8 centigrade, but should be kept at -20 centigrade for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 centigrade. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 centigrade to -70 centigrade. Avoid repeated freeze/thaw cycles.
Reconstitution	Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 centigrade. Further dilutions should be made in appropriate buffered solutions.
Quality Statement	Our GMP proteins are produced according to relevant sections of the following documents: WHO TRS, No. 822, 1992 Annex 1, Good Manufacturing Practices for Biological Products; USP Chapter 1043, Ancillary Materials for Cell, Gene and Tissue-Engineered Products and USP Chapter 92, Growth Factors and Cytokines Used in Cell Therapy Manufacturing.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the recommended temperature.

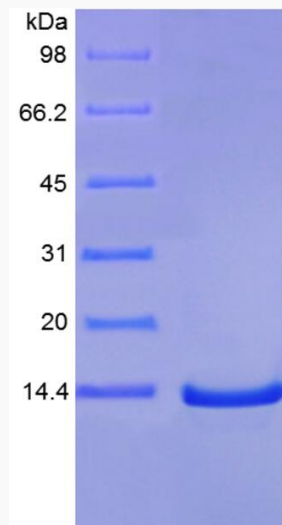
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GENE INFORMATION

Gene Name	IL9 interleukin 9 [Homo sapiens (human)]
Official Symbol	IL9
Synonyms	P40; HP40; IL-9; Cytokine P40, T-cell Growth Factor P40
Gene ID	3578
mRNA Refseq	NM_000590.1
Protein Refseq	NP_000581.1
MIM	146931
UniProt ID	P15248



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