IL-9 Protein, Human (HEK293, His)

Cat. No.:	HY-P70539
Synonyms:	Interleukin-9; IL-9; Cytokine P40; T-Cell Growth Factor P40; IL9
Species:	Human
Source:	HEK293
Accession:	P15248 (Q19-I144)
Gene ID:	3578
Molecular Weight:	25-40 kD

PROPERTIES

AA Sequence	Q G C P T L A G I L D I N F L I N K M Q E D P A S K C H C S A N V T S C L C L G I P S D N C T R P C F S E R L S Q M T N T T M Q T R Y P L I F S R V K K S V E V L K N N K C P Y F S C E Q P C N Q T T A G N A L T F L K S L L E I F Q K E K M R G M R G K I
Biological Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED_{50} for this effect is 0.05889 ng/mL, corresponding to a specific activity is 1.7×10^7 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US;may vary elsewhere.

DESCRIPTION

Background	IL-9 protein, a multifunctional cytokine primarily secreted by T-helper 2 lymphocytes, mast cells, or NKT cells, plays crucial roles in the immune response against parasites. Its impact extends to intestinal epithelial permeability and adaptive immunity. IL-9 further contributes to the differentiation of specific T-cell subsets, including IL-17 producing helper T-cells (TH17), and promotes the proliferation and differentiation of mast cells. Functionally, IL-9 exerts its biological effects through a receptor composed of the IL9R subunit and the signal transducing subunit IL2RG. Receptor stimulation rapidly

activates JAK1 and JAK3 kinase activities, leading to STAT1, STAT3, and STAT5-mediated transcriptional programs. While the induction of differentiation genes appears to be mediated by STAT1 alone, the protection of cells from apoptosis depends on STAT3 and STAT5. IL-9 interacts with the IL9R subunit and IL2RG, forming a molecular basis for its diverse cellular effects.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA