

Overview

Synonyms	p40 cytokine; T-cell growth factor p40; IL9; IL-9; interleukin-9
Description	Interleukin 9, also known as IL9, is a cytokine (cell signalling molecule) belonging to the group of interleukins. The protein encoded by this gene is a cytokine produced by T-cells and specifically by CD4+ helper cells that acts as a regulator of a variety of hematopoietic cells. This cytokine stimulates cell proliferation and prevents apoptosis. It functions through the interleukin-9 receptor (IL9R), which activates different signal transducer and activator (STAT) proteins and thus connects this cytokine to various biological processes. 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 hyperresponsiveness. Recombinant Mouse IL-9 produced in HEK293 cells is a polypeptide chain containing 146 amino acids. A fully biologically active molecule, rmlIL-9 has a molecular mass of 30-35 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.
Biological Activity	ED50 < 10 ng/ml, measured in a cell proliferation assay using MO7e cells.
Sequence	Gln ¹⁹ -Pro ¹⁴⁴ (Accession #:P15247) QRCSTTWG IRDTNYLI ENLKDDPP SKCSCSGN VTSCLCLS VPTDDCTT PCYREGLL QLTNATQK SRLLPVFH RVKRIVEV LKNITCPS FSCEKPCN QTMAGNTL SFLKSLLG TFQKTEMQ RQKSRP

Properties

Molecular Weight	30-35 kDa, observed by reducing SDS-PAGE.
Purity	> 95% as analyzed by reducing SDS-PAGE.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS.
Reconstitution	Reconstituted in ddH ₂ O or PBS at 100 µg/ml.
Endotoxin Level	< 0.2 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant IL-9 remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, Mouse IL-9 should be stable up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.
Note	For research use only

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