

Recombinant Human IL-9

Information

Accession #	P15248
Alternate Names	Human IL9; IL9; IL-9; interleukin 9; Cytokine P40; HP40
Source	Human embryonic kidney cell, HEK293-derived human IL9 protein
Protein sequence	Gln19-Ile144
M.Wt	14.1 kDa
Appearance	Solution protein.
Stability & Storage	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 3 years from date of receipt, -20 to -70 °C as supplied.
Concentration	1 mg/mL
Formulation	Dissolved in sterile PBS buffer to a concentration of 0.2 mg/mL.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Measured in a cell proliferation assay using MO7e human megakaryocytic leukemic cells. The EC50 for this effect is 100-200 pg/mL.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95%, determined by SDS-PAGE.
Endotoxin	<0.010 EU per 1 ug of the protein by the LAL method.

Description

Interleukin-9 (IL-9), also known as P40 and MEA (mast cell growth-enhancing activity), is a 30-40 kDa glycosylated member of a cytokine family that includes Interleukins-2, -4, -7, -15, and -21. These proteins utilize heteromeric receptors containing the Common gamma chain (gamma c) in addition to ligand-specific subunits. IL-9 interacts selectively with IL-9 R which then associates with gamma c to form the functional receptor complex. IL-9 contributes to allergic inflammation, autoimmunity-induced inflammation, parasite clearance from the GI tract, and Treg-mediated immune suppression [1, 2]. It enhances the expansion and recruitment of mast cells and eosinophils as well as the production of IgE and Th2 cytokines [3-6]. It is required for anaphylactic responses to ingested allergens but not to systemic allergens [7]. IL-9 plays multiple roles in the development

and function of subsets within the CD4⁺ T cell lineage [8]. It is expressed by activated Th9, Th17, Treg, and Th2 cells [3, 9-12]. IL-9 acts as an autocrine growth and activation factor for Th17, Treg, and mast cells [3, 11, 13].

Reference

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