

IL-9 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	HP40;Cytokine P40;Interleukin-9;P40;T-cell growth factor P40;IL-9
Protein Construction:	Gln19-Ile144
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P15248
Molecular Weight:	40.9 kDa (predicted). Due to glycosylation, the protein migrates to 50-70 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Human IL-9, hFc Tag at 0.5µg/ml (100µl/Well) on the plate. Dose response curve for Biotinylated Anti-IL-9 Antibody, hFc Tag with the EC50 of 18.9ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

IL-9 is a pleiotropic cytokine that influences various distinct functions of different target cells such as T cells, B cells, mast cells and airway epithelial cells by activating STAT1, STAT3 and STAT5. Because of its pleiotropic functions, IL-9 has been demonstrated to be involved in several diseases, such as cancer, autoimmunity and other pathogen-mediated immune-regulated diseases. In this review, we focus on the role of Th9 and IL-9-producing cells in allergic asthma.

Reference

Koch S, Sopel N, Finotto S. Th9 and other IL-9-producing cells in allergic asthma. *Semin Immunopathol.* 2017 Jan; 39(1):55-68. doi: 10.1007/s00281-016-0601-Epub 2016 Nov 17. PMID: 27858144.

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