

Recombinant Human Interleukin 9

Cat. No. IL9-216H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human interleukin 9 sequence encoding the 126 amino acid human IL-9 protein sequence was inserted into a suitable expression vector and was expressed in <i>Sf 21 insect cells</i> using a baculovirus expression system.
Species	Human
Source	Sf21 Cells
Description	Interleukin 9, also known as IL9, is a TH2 cytokine belonging to the group of interleukins. 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. IL-9 stimulates the proliferation of a variety of hematopoietic lineages through its interaction with a receptor of the cytokine receptor superfamily. IL-9 plays a role in the complex pathogenesis of bronchial hyperresponsiveness as a risk factor for asthma.
Molecular Weight	The predicted molecular weight of Recombinant Human IL-9 is Mr 16-25 kDa. The protein resolves into multiple bands within this range on SDS-Page.
State Of Matter	Lyophilized.
Formulation	This recombinant protein was 0.2 µm filtered and lyophilized from modified Dulbecco's phosphate buffered saline (1X PBS) pH 7.2 – 7.3 with no calcium, magnesium, or preservatives present.

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Purity	> 97% by SDS Page and analyzed by silver stain.
Endotoxin	< 0.1 ng per 1 µg as determined by the LAL method.
Biological Activity	The biological activity of Human IL-9 was determined by its ability to stimulate cell proliferation in the factor-dependent human megakaryocytic leukemic cell line, M07e. The expected ED50 for this effect is typically 0.5 - 1.0 ng/mL.
Storage And Stability	This lyophilized protein is stable for six to twelve months when stored desiccated at -20°C to -70°C. After aseptic reconstitution, this protein may be stored at 2°C to 8°C for one month or at -20°C to -70°C in a manual defrost freezer. Avoid Repeated Freeze Thaw Cycles. See Product Insert for exact lot specific storage instructions.

GENE INFORMATION

Gene Name	IL9 interleukin 9 [Homo sapiens]
Synonyms	IL9; interleukin 9; P40; HP40; IL-9; p40 T-cell and mast cell growth factor; T-cell growth factor p40; p40 cytokine; homolog of mouse T cell and mast cell growth factor 40; OTTHUMP00000159423
Gene ID	3578
mRNA Refseq	NM_000590
Protein Refseq	NP_000581
UniProt ID	P15248
Chromosome Location	4q13-q21

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MIM	146931
Pathway	Asthma; Cytokine-cytokine receptor interaction; Jak-STAT signaling pathway
Function	cytokine activity; cytokine receptor binding; growth factor activity

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