

## 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 *Sf 21 insect cells* 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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<b>Purity</b>	> 97% by SDS Page and analyzed by silver stain.
<b>Endotoxin</b>	< 0.1 ng per 1 g as determined by the LAL method.
<b>Biological Activity</b>	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.
<b>Storage And Stability</b>	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

<b>Gene Name</b>	IL9 interleukin 9 [ Homo sapiens ]
<b>Synonyms</b>	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
<b>Gene ID</b>	3578
<b>mRNA Refseq</b>	NM_000590
<b>Protein Refseq</b>	NP_000581
<b>UniProt ID</b>	P15248
<b>Chromosome Location</b>	4q13-q21

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

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