

#### **Synonym**

Interleukin-9,IL-9,Cytokine P40

#### **Source**

Human IL-9 Protein, premium grade(IL9-H5214) is expressed from human 293 cells (HEK293). It contains AA Gln 19 - Ile 144 (Accession # P15248-1). Predicted N-terminus: Gln 19

Human IL-9 Protein, premium grade (IL9-H5214), designed for preclinical stage, has the same activity and performance with GMP Human IL-9 Protein, which enables a seamless transition from preclinical development to clinical phases. Premium Grade product offer a cost efficient alternative of GMP Grade products for the early development phase when safety of raw materials is not top priority. By using Premium Grade products in early development phase, you can transition easily into clinical and commercial phase without need to revalidate the raw materials and modify manufacturing process.

### **Molecular Characterization**

IL-9(Gln 19 - Ile 144) P15248-1

This protein carries no "tag".

The protein has a calculated MW of 14.1 kDa. The protein migrates as 30 kDa±3 kDa under reducing (R) condition, and 30 kDa when calibrated against <u>Star</u> <u>Ribbon Pre-stained Protein Marker</u> under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.

#### **Endotoxin**

Less than 0.01 EU per µg by the LAL method.

#### **Host Cell Protein**

<0.5 ng/µg of protein tested by ELISA.

## **Host Cell DNA**

<0.02 ng/μg of protein tested by qPCR.

### **Sterility**

Negative

### Mycoplasma

Negative.

#### **Purity**

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

### Formulation

Lyophilized from  $0.22~\mu m$  filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

#### Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

#### **Storage**

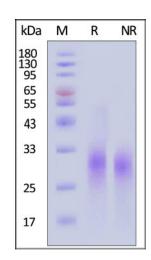
For long term storage, the product should be stored at lyophilized state at  $-20^{\circ}$ C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

### **SDS-PAGE**



# SEC-MALS

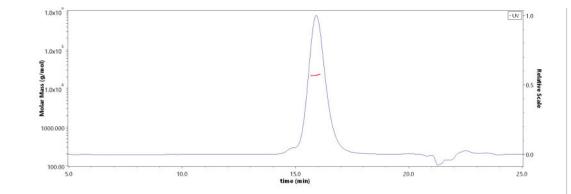
### **Human IL-9 Protein, premium grade**

Catalog # IL9-H5214





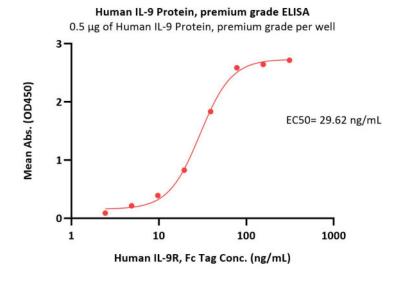
Human IL-9 Protein, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).



The purity of Human IL-9 Protein, premium grade (Cat. No. IL9-H5214) is more than 95% and the molecular weight of this protein is around 18-25 kDa verified by SEC-MALS.

Report

### **Bioactivity-ELISA**



Immobilized Human IL-9 Protein, premium grade (Cat. No. IL9-H5214) at 5 μg/mL (100 μL/well) can bind Human IL-9R, Fc Tag (Cat. No. ILR-H5251) with a linear range of 2-78 ng/mL (QC tested).

### Background

Interleukin-9 (IL-9) is expressed primarily by activated T cells. The growth factor and anti apoptotic activities of IL-9 on multiple transformed cells suggest a potential role for the cytokine in tumourigenesis. IL-9 has also been proposed as a candidate gene for asthma IL-9 is a Th2-derived cyto kine that has been reported to regulate T and B cell function. IL-9was first isolated as a factor capable of sustaining the long-termgrowth of murine T cell clones, but has since been demon strated to have in vitro activities on mast cells, erythroid pro genitors, and B cell Ig expression.

### **Clinical and Translational Updates**

