

# Recombinant Mouse IL-4 Protein

Catalog No.: RP01161 **Recombinant** **20 Publications**

## Sequence Information

Species	Gene ID	Swiss Prot
Mouse	16189	P07750

### Tags

C-His

### Synonyms

IL-4; BSF-1; IL4

## Product Information

Source	Purification
HEK293 cells	≥ 95 % as determined by SDS-PAGE; ≥ 95 % as determined by HPLC.

Calculated MW	Observed MW
14.15 kDa	20 kDa

### Endotoxin

< 0.1 EU/μg of the protein by LAL method.

### Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

### Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Contact

	400-999-6126
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## Background

Interleukin-4, also known as IL4, is a secreted protein that belongs to the IL-4 / IL-13 family. Interleukin-4 / IL4 has many biological roles, including the stimulation of activated B-cell and T-cell proliferation. It enhances both secretion and cell surface expression of IgE and IgG1. Interleukin-4 / IL4 also regulates the expression of the low-affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. Interleukin-4 is essential for the switching of B cells to IgE antibody production and the maturation of T helper (Th) cells toward the Th2 phenotype.

## Basic Information

### Description

Recombinant Mouse IL-4 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (His23-Ser140) of mouse IL-4 (Accession #NP\_067258.1) fused with a 6×His tag at the C-terminus.

### Bio-Activity

1. Measured in a cell proliferation assay using MC/9 2 mouse mast cells. The ED<sub>50</sub> for this effect is 2.8-11.3 pg/mL, corresponding to a specific activity of 8.85×10<sup>7</sup>~3.57×10<sup>8</sup> units/mg. | 2. Measured in a cell proliferation assay using HT-2 mouse T cells. The ED<sub>50</sub> for this effect is 1.18-4.70 ng/mL, corresponding to a specific activity of 2.13×10<sup>5</sup>~8.51×10<sup>6</sup> units/mg.

### Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

### Storage

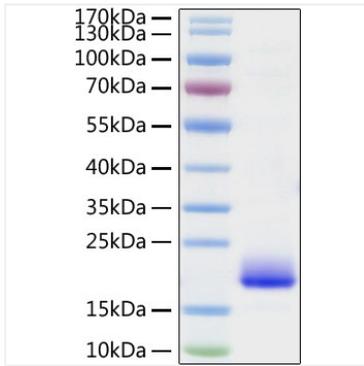
Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

### Operational Notes

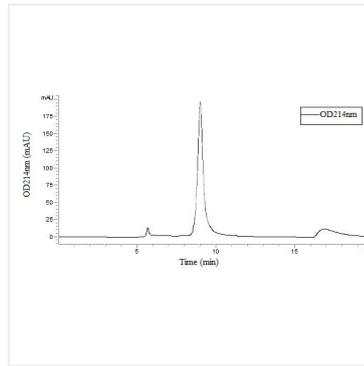
For your safety and health, please wear a lab coat and disposable gloves for handling.



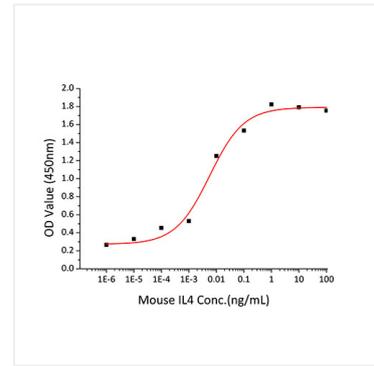
## Validation Data



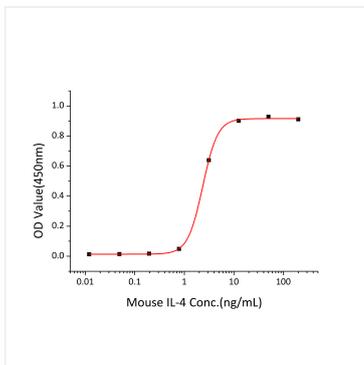
Recombinant Mouse IL-4 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant Mouse IL-4 Protein is greater than 95% as determined by SEC-HPLC.



Recombinant Mouse IL-4 promote the proliferation of MC/9 2 mouse mast cells. The  $ED_{50}$  for this effect is 2.8-11.3  $\mu\text{g/mL}$ , corresponding to a specific activity of  $8.85 \times 10^7 \sim 3.57 \times 10^8$  units/mg.



Recombinant Mouse IL4 stimulates cell proliferation of HT-2 mouse T cells. The  $ED_{50}$  for this effect is 1.18-4.70  $\text{ng/mL}$ , corresponding to a specific activity of  $2.13 \times 10^5 \sim 8.51 \times 10^6$  units/mg.