

RP01161

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# Recombinant Mouse IL-4 Protein

Catalog No.: RP01161

Recombinant

1 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% by SDS-PAGE. |

### 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



[www.abclonal.com](http://www.abclonal.com)

## 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.

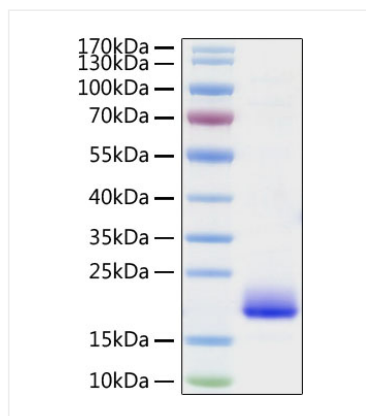
### Bio-Activity

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  $8.85 \times 10^7 \sim 3.57 \times 10^8$  units/mg. 2. Measured in a cell proliferation assay using HT-2 mouse T cells. The ED<sub>50</sub> for this effect is 0.21-0.85 ng/mL, corresponding to a specific activity of  $1.18 \times 10^6 \sim 4.76 \times 10^6$  units/mg.

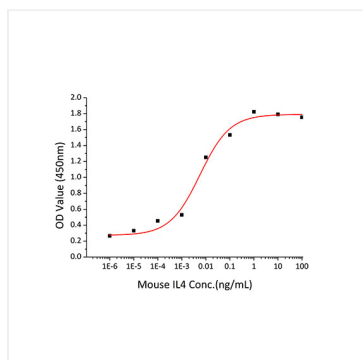
### Storage

Store the lyophilized protein at -20°C to -80 °C for long term. 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.

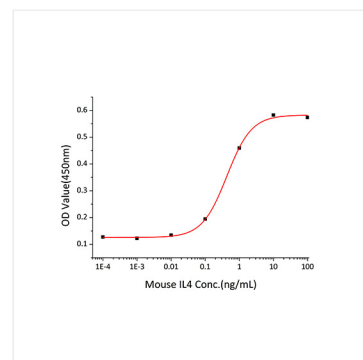
## Validation Data



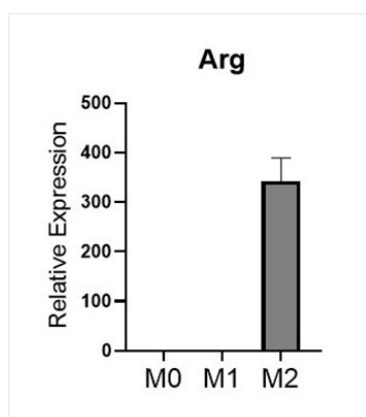
Recombinant Mouse IL-4 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 20 kDa.



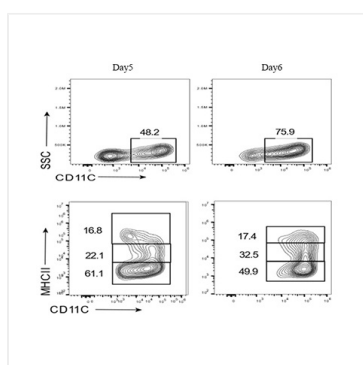
Recombinant Mouse IL-4 promote the proliferation of MC/9 2 mouse mast cells. The ED<sub>50</sub> for this effect is 2.8-11.3 pg/mL, corresponding to a specific activity of  $8.85 \times 10^7 \sim 3.57 \times 10^8$  units/mg.



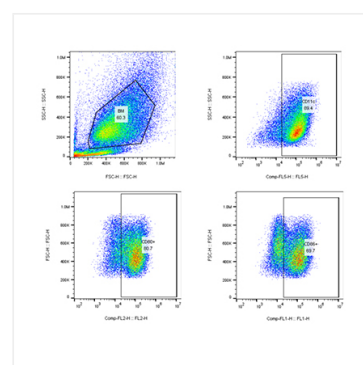
Recombinant Mouse IL4 stimulates cell proliferation of the HT-2 mouse T cells. The ED<sub>50</sub> for this effect is 0.21-0.85 ng/mL, corresponding to a specific activity of  $1.18 \times 10^6 \sim 4.76 \times 10^6$  units/mg.



Active Recombinant Mouse IL-4 induces Mouse Bone marrow derived macrophage (BMDM) differentiation into M2-type. 20 ng/mL of Recombinant Mouse IL-4 and Mouse IL-13 can effectively upregulate the expression of M2-type biomarker Arg-1. (Customer feedback data)



Mouse IL-4 (10 ng/mL) and GM-CSF (20 ng/mL) induce C57BL/6J Mouse cells differentiate into BMDC. After 6 days, up to 75% of cells in the system expressed DC biomarker CD11c on cell surface, among which more than 15% cells have high expression of MHCII, shows that the induction was successful. (Customer feedback data)



Recombinant Mouse IL-4 (10 ng/mL) and GM-CSF protein (20 ng/mL) induce C57BL/6J Mouse bone marrow cells to differentiate into BMDC. After 7 days, up to 89.4% of cells in the system expressed DC biomarker CD11c on cell surface, among which more than half of the cells have high expression of CD80 and CD86 proteins. (Customer feedback data)