Recombinant Rat IL-4 Protein

Catalog No.: RP01874 Recombinant



Sequence Information

Species Gene ID Swiss Prot Rat 287287 P20096

Tags

C-His

Synonyms

B-cell growth factor 1; B-cell IGG differentiation factor; B-cell stimulatory factor 1; BSF-1; H-IL-4; IL-4; ILN; Interleukin; Interleukin-4; Interleukin4; Lymphocyte stimulatory factor 1; M-IL-4; MGC79402

Product Information

Source

Purification

HEK293 cells

≥ 90% as determined by SDS-

PAGE.

Calculated MW Observed MW

14.60 kDa 15-25 kDa

Endotoxin

 $< 0.01 \; \text{EU/}\mu\text{g}$ of the protein by LAL method

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

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 stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

6		400-999-6126
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Background

Interleukin-4 (IL-4) is a pleiotropic, immune-modulatory cytokine produced by activated T cells, and serves as a ligand for interleukin 4 receptor. IL-4 has been found to have the broadest range of actions. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play an important role in mediating the immune regulatory signal of IL-4. The IL-4 gene, IL-3, IL-5, IL-13, and CSF2 form a cytokine gene cluster on chromosome 5q. In particular, IL-4 is located in close proximity to IL13 on the chromosome. Further, the IL-4 gene, IL13 and IL5 are found to be coordinated by several long-range regulatory elements over a 120 kilobase range on the chromosome. IL-4 delta 2 is a known splice variant of II-4

Basic Information

Description

Recombinant Rat IL-4 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Cys25-Ser147) of Rat IL-4 (Accession #NP 958427.1) fused with a His at the C-terminus.

Bio-Activity

Measured in a cell proliferation assay using TF-1 Human erythroleukemic cells. The ED $_{50}$ for this effect is 0.65-2.6 μ g/mL, corresponding to a specific activity of $3.85 \times 10^2 \sim 1.54 \times 10^3$ 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.

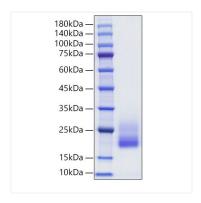
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

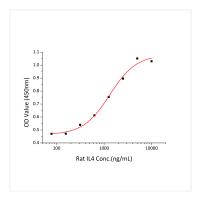
Operational Notes

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

Validation Data



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



Recombinant Rat IL-4 stimulates cell proliferation assay using TF-1 Human erythroleukemic cells. The ED $_{50}$ for this effect is 0.65-2.6 µg/mL, corresponding to a specific activity of $3.85\times10^2\sim1.54\times10^3$ units/mg.