

Recombinant Rat IL-4 Protein

Catalog No.: RP01874

Sequence Information

Species	Gene ID
Rat	287287
Swiss Prot	Tags
P20096	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 EU/μg 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 stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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 IL-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.

Activity

Measured in a cell proliferation assay using TF-1 Human erythroleukemic cells. The ED₅₀ for this effect is 0.65-2.6 μg/mL, corresponding to a specific activity of 3.85×10²~1.54×10³ units/mg.

Shipping

Lyophilized proteins are shipped at ambient temperature. Liquid proteins are shipped at frozen temperature with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

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

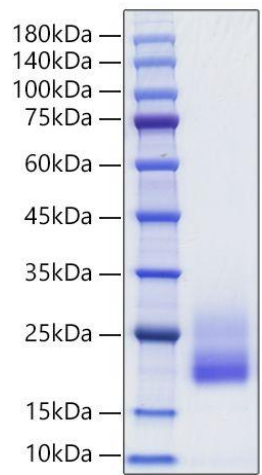
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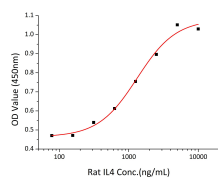
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Validation Data



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 $\mu\text{g/mL}$, corresponding to a specific activity of $3.85 \times 10^2 \sim 1.54 \times 10^3$ units/mg.