



Interleukin-4, Rhesus Macaque recombinant (rrmIL-4)

Catalog No: 97592
Lot No: XXXXX
Source: *E. coli*
Synonyms: Interleukin-4, IL-4, B-cell stimulatory factor 1, BSF-1, Lymphocyte stimulatory factor 1, IL4

Background

IL4 is a pleiotropic cytokine produced by activated T cells. IL4 is a ligand for interleukin 4 receptor. 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 a central role in mediating the immune regulatory signal of this cytokine. This gene, IL3, IL5, IL13, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL13. IL4, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported.

Description

Interleukin-4 Rhesus Macaque recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 129 amino acids and having a molecular mass of 14.9 kDa. IL-4 Rhesus Macaque is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a 0.2 µm filtered concentrated solution in 1xPBS, pH 7.4.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-4 in sterile 18 MΩ-cm H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Interleukin-4, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL-4 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

HNCHIALREI IETLNSLTEQ KTLCTKLTIT DILAASKNNT EKETFCAAAT VLRQFYSHHE KDTRCLGATA QQFHRHKQLI
RFLKRLDRNL WGLAGLNSCP VKEANQSTLE DFLERLKTIM REKYSKCSS

Activity

The ED₅₀ as determined by the dose-dependent stimulation of TF1 cells is less than 0.2 ng/ml, corresponding to a specific activity of >5.0 × 10⁶ IU/mg.

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