



Interleukin-5, human recombinant (rHuIL-5)

Catalog No: 51558
Lot No: XXXXX
Source: *E. coli*
Synonyms: EDF, BCDFII, TRF, T-cell replacing factor, Eosinophil differentiation factor, B cell differentiation factor I, IL-5

Background

The protein encoded by this gene is a cytokine that acts as a growth and differentiation factor for both B cells and eosinophils. This cytokine is a main regulator of eosinopoiesis, eosinophil maturation and activation. The elevated production of this cytokine is reported to be related to asthma or hypereosinophilic syndromes. The receptor of this cytokine is a heterodimer, whose beta subunit is shared with the receptors for interleukin 3 (IL3) and colony stimulating factor 2 (CSF2/GM-CSF). This gene, together with those for interleukin 4 (IL4), interleukin 13 (IL13), and CSF2, form a cytokine gene cluster on chromosome 5. This cytokine, IL4, and IL13 are found to be regulated coordinately by long-range regulatory elements spread over 120 kilobases on chromosome 5q31.

Description

Interleukin-5 human recombinant produced in *E. coli* is a dimeric, non-glycosylated polypeptide chain containing two 113 amino acids chains, and having a molecular mass of 26522.84 Dalton. IL-5 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

Lyophilized from a concentrated (1 mg/ml) solution in water containing no additives.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-5 in sterile 18 M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Stability

Lyophilized Interleukin-5, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL-5 should be stored at 4°C between 2-7 days and for future use below -18°C. Please avoid freeze thaw cycles.

Purity

Greater than 98.0% as determined by RP-HPLC and SDS-PAGE.

Amino Acid Sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Met- Ile-Pro-Thr-Glu.

Activity

The ED50 as determined by the dose-dependant stimulation of the proliferation of TF-1 cells was found to be <0.15 ng/ml, corresponding to a specific activity of 6 x 10⁶ IU/mg.

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