



Interleukin-13, human recombinant (rHuIL-13)

Catalog No: 51562
Lot No: XXXXX
Source: *E. coli*
Synonyms: NC30, ALRH, BHR1, P600, IL-13, MGC116786, MGC116788, MGC116789

Background

IL13 is an immunoregulatory cytokine produced primarily by activated Th2 cells. IL-13 is involved in several stages of B-cell maturation and differentiation. It up-regulates CD23 and MHC class II expression, and promotes IgE isotype switching of B cells. This cytokine down-regulates macrophage activity, thereby inhibits the production of pro-inflammatory cytokines and chemokines. This cytokine is found to be critical to the pathogenesis of allergen-induced asthma but operates through mechanisms independent of IgE and eosinophils. This gene, IL3, IL5, IL4, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL4.

Description

Interleukin-13 human recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 112 amino acids and having a molecular mass of 12 kDa. IL-13 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

Formulation

The protein (1 mg/ml) was lyophilized with 1xPBS pH 7.2 and 5% trehalose.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-13 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-13, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL-13 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 95% as determined by (a) Analysis by RP-HPLC, (b) Analysis by SDS-PAGE.

Amino Acid Sequence

GPVPPSTALR ELIEELVNIT QNQQAPLCNG SMVWSINLTA GMYCAALES L INVSGCSAIE KTQRMLSGFC PHKVSAGQFS
SLHVRDTKIE VAQFVKDLLL HLKCLFREGR FN

Activity

The ED50 was determined by the dose dependent proliferation of TF-1 cells and was found to be <1 ng/ml, corresponding to a specific activity of >1 x 10⁶ units/mg.

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