



Interleukin-13 Variant (IL-13), human recombinant (rHull-13)

Catalog No: 97296
Lot No: XXXXX
Source: *E. coli*
Synonyms: Interleukin-13, 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 Variant human recombinant produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 114 amino acids, with a substitution of Q for R at position 112 compared with the wild type IL-13, having a molecular mass of 12.5 kDa. IL-13 Variant 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 7.2, containing 5% trehalose.

Solubility

It is recommended to reconstitute the lyophilized Interleukin-13 Variant 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-13 Variant, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL13 Variant 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

SPGPVPPSTA LRELIEELVN ITQNQKAPLC NGSMVWSINL TAGMYCAALE SLINVSGCSA IEKTQRMLSG FCPHKVSAGQ
FSSLHVRDTK IEVAQFVKDL LLHLKKLFRF GQFN

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 >1,000,000 units/mg. This analog has also been shown to exhibit increased in vivo activity compared to wild type IL-13.

CONTACT US TODAY

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51



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