

Recombinant Human Interleukin-13 (rh IL-13)

Synonyms: NC30 (human), P600 (murine)

Description: IL-13 is an immunoregulatory cytokine produced primarily by activated Th2 cells. IL-13 is involved in several stages of B-cell maturation and differentiation. It regulates CD23 and MHC class II expression up and promotes IgE isotype switching of B cells. IL-13 regulates macrophage activity down and inhibits thereby the production of pro-inflammatory cytokines and chemokines. IL-13 is found to be critical to the pathogenesis of allergen-induced asthma, but operates through mechanisms independent of IgE and eosinophils. IL-13, IL-3, IL-4, IL-5, and GM-CSF form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL-4.

Description: Recombinant human IL-13 produced in *E.Coli* is a single, non-glycosylated polypeptide chain containing 112 amino acids and having a molecular mass of 12 kDa. The rh IL-13 is purified by proprietary chromatographic techniques.

Source: *Escherichia Coli*.

Physical Appearance: Sterile filtered white lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a 0.22 µm filtered solution in PBS pH-7.2 & 5% trehalose

Solubility: It is recommended to reconstitute the lyophilized rh IL-13 in sterile H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Stability: Lyophilized rh IL-13 although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh 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 95.0% as determined by RP-HPLC. and by SDS-PAGE.

Amino acid sequence: GPVPPSTALRELIEELVNITQNQKAPLCNGSMVWSINLTAGMYCAALESINVS
GCSAIEKTQRMLSGFPCPKV/SAGQFSSLHVRDTKIEVAQFVKDLLLHLKCLFREGRFN

Biological Activity: The ED₅₀ as determined by the dose-dependant proliferation of TF-1 cells is < 1ng/ml, corresponding to a specific activity of >1 x 10⁶ IU/mg.

Protein Content: Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 0.57 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a calibrated solution of IL-13 as a Reference Standard

This material is offered for **research use only**. Not for use in human. For in vitro use only. ImmunoTools will not be held responsible for patent infringement or other violations that may occur with the use of our products.

<i>small</i>	2 µg	Cat.N°	11340132
<i>medium</i>	10 µg	Cat.N°	11340133
<i>large</i>	50 µg	Cat.N°	11340135
<i>x-large</i>	250 µg	Cat.N°	11340137

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