

## Recombinant Human Interleukin-13 Variant (rh IL-13 V)

**Synonyms:** NC30, ALRH, BHR1, P600

**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 Variant 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. The IL-13 Variant is purified by proprietary chromatographic techniques.

**Source:** *Escherichia Coli*.

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

**Formulation:** Lyophilized from a 0.2µm filtered concentrated solution in 1xPBS, pH 7.2, containing 5% trehalose.

**Solubility:** It is recommended to reconstitute the lyophilized rh IL-13V in sterile H<sub>2</sub>O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

**Stability:** Lyophilized rh IL-13V although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution rh IL-13V 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:

- (a) Analysis by RP-HPLC.
- (b) Analysis by reducing and non-reducing SDS-PAGE silver stained gel.

**Amino acid sequence:** SPGPVPPSTA LRELIEELVN ITQNQKAPLC NGSMVWSINL TAGMYCAALE SLINVSIGCSA IEKTQRMLSG FCPHKVSAGQ FSSLHVRDTK IEVAQFVKDL LLHLKCLFRE GQFN.

**Biological Activity:** The ED<sub>50</sub> was determined by the dose dependent proliferation of TF-1 cells and was found to be < 1ng/ml, corresponding to a specific activity of >1 x 10<sup>6</sup>. This analog has also been shown to exhibit increased in vivo activity compared to wild type IL-13.

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°	11349132
<i>medium</i>	10 µg	Cat.N°	11349133

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