

# Recombinant Human Interleukin-13, Variant (rHuIL-13, Variant)

## PrimeGene Technical DataSheet

<b>Catalog Number:</b>	101-13V
<b>Source:</b>	<i>Escherichia coli</i>
<b>Molecular Weight:</b>	Approximately 12.3 kDa, a single non-glycosylated polypeptide chain containing 112 amino acids, with a substitution of Q for R at position 110 compared with the wild type IL-13.
<b>Size:</b>	10µg/ 100µg/ 500µg/ 1mg
<b>AA Sequence:</b>	GPVPPSTALR ELIEELVNIT QNQKAPLCNG SMVWSINLTA GMYCAALES� INVSGCSAIE KTQRMLSGFC PHKVSAGQFS SLHVRDTKIE VAQFVKDLLL HLKCLFREGQ FN
<b>Purity:</b>	> 97 % by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by a cell proliferation assay using human TF-1 cells is less than 0.5 ng/ml, corresponding to a specific activity of > 2.0 × 10 <sup>6</sup> IU/mg.
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.2, with 5 % trehalose, 0.02 % Tween-20.
<b>Endotoxin:</b>	Less than 1 EU/µg of rHuIL-13, Variant as determined by LAL method.
<b>Reconstitution:</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Shipping:</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>

### *Human Interleukin-13, Variant*

Human Interleukin-13 (IL-13) is expressed by the IL13 gene located on the chromosome 5. IL-13 is a 132 amino acid protein containing a proposed 20 amino acid signal peptide, and shares approximately 30 % amino acid sequence homology to human IL-4. Additionally, the two cytokines exhibit overlapping biological activities. Human IL-13 is produced by activated Th0, Th1-like Th2-like and CD8 T cells. Similarly to IL-4, IL-13 has multiple effects on the differentiation and functions of monocytes/macrophages. IL-13 can suppress the cytotoxic functions of monocytes/macrophages.

IL-13 variant is a natural variant of IL-13 and has a Q instead of R110 of wild type, which associated with increased risk for asthma development and at homozygosity associated with higher levels of serum total IgE in some allergic rhinitis patients.