

Recombinant Human Interleukin-13, Variant

Information

Gene ID	3596
Accession #	P35225
Alternate Names	
Source	Escherichia coli.
M.Wt	Approximately 12.3 kDa, a single non-glycosylated polypeptide chain containing 112 amino acids, with a substitution of Q for R at position 112 compared with the wild type IL-13.
AA Sequence	GPVPPSTALR ELIEELVNIT QNQKAPLCNG SMVWSINLTA GMYCAALES INVS GCSAIE KTQRMLSGFC PHKVSAGQFS SLHVRDTKIE VAQFVKDLLL HLKKLFREGQ FN
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.2, with 5 % trehalose.
Reconstitution	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.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ 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 ⁶ IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	10µg	100µg	500µg
Recombinant Human Interleukin-13, Variant	10µg	100µg	500µg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles

- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

Purity	> 97 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1 EU/μg of rHuIL-13, Variant as determined by LAL method.

Description

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 R112 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.

Reference

1. Schmutz J, Martin J, Terry A, et al. 2004. Nature, 431: 268-74
2. Wynn TA. 2003. Annu Rev Immunol, 21: 425-56
3. Heinzmann A, Mao XQ, Akaiwa M, et al. 2000. Hum Mol Genet, 9: 549-59
4. Wang M, Xing ZM, Lu C, et al. 2003. Hum Genet, 113: 387-90.

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