

Recombinant Human IL-13 (carrier-free)

Catalog # / Size: 571102 / 10 µg
571104 / 25 µg
571106 / 100 µg

Source: Human IL-13, amino acids Gly21-Asn132 (Accession# NM_002188), was expressed in *E. coli*.

Molecular Mass: The 112 amino acid recombinant protein has a predicted molecular mass of 12,344 Da. The DTT-reduced and non-reduced protein migrate at approximately 9kDa by SDS-PAGE. The N-terminal amino acid is Glycine.

Purity: Purity is >98%, as determined by Coomassie stained SDS-PAGE.

Endotoxin Level: Endotoxin level is < 0.1 EU/µg (< 0.01ng/µg) protein as determined by the LAL method.

Activity: The ED50 is 1.5 to 3ng/ml, corresponding to a specific activity of 6.6 -- 3.3 x 10⁵units/mg, as determined by the dose dependent stimulation of TF-1 cells proliferation.

Formulation: 0.22µm filtered protein solution is in 10mM NaH₂PO₄, 150mM NaCl, pH 7.2.

Concentration: 10-100 µg sizes are bottled at 200 µg/mL.

Storage: Unopened vial can be stored at 4°C for three months, at -20°C for six months, or at -70°C for one year. For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10µg/mL in buffer containing carrier protein such as 1% BSA or HSA or 10% FBS. For long term storage, aliquot into polypropylene vials and store in a manual defrost freezer. **Avoid repeated freeze/thaw cycles.**

Applications:

Applications: Bioassay

Description: Human IL-13 was initially cloned from cDNA libraries of activated T cells. IL-13 is an immunoregulatory cytokine secreted predominantly by activated T(H)2 cells, and it is a key mediator in the pathogenesis of allergic inflammation. IL-13 shares many functional properties with IL-4, and they share a common receptor subunit, the alpha subunit of the IL-4 receptor (IL-4Ralpha). IL-13 mediates its effects by interacting with a complex receptor system comprised of IL-4Ralpha and two IL-13 binding proteins, IL-13Ralpha1 and IL-13Ralpha2. Ligation of the IL-13 receptor complex results in signaling via the insulin receptor substrate (IRS)-1 and 2 and STAD-6 pathways. Interleukin-13 (IL-13), like IL-4, is a cytokine produced by T(H)2 type helper T cells in response to signaling through the T cell antigen receptor and by mast cells and basophils upon cross-linkage of the high-affinity receptor for immunoglobulin E (IgE). IL-13 has been implicated in airway hypersensitivity and mucus hypersecretion, inflammatory bowel disease, and parasitic nematode expulsion.

Antigen References: 1. McKenzie ANJ, *et al.* P. Natl. Acad. Sci. USA 90:3735-3739 1993.
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3. Kelly-Wellch, *et al.* Science Signaling 293:2005.
4. Hershey GK J Allergy Clin Immunol 111:677-690 2003.
5. Harris J, *et al.* Immunity 27:505-517 2007.
6. LaPorte SL, *et al.* Cell 132:259-272 2008.



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