

Interleukin-13 Rat E. coli

Product Data Sheet

Type: Recombinant	Cat. No.:	
Source: E. coli	RBG30013002	(2 µg)
Species: Rat	RBG30013010	(10 µg)
Other names: IL-13, ALRH	RBG30013100	(100 µg)

Description

IL-13 is an immunoregulatory cytokine produced primarily by activated Th2 cells, and also by mast cells and NK cells. Targeted deletion of IL-13 in mice resulted in impaired Th2 cell development and indicated an important role for IL-13 in the expulsion of gastrointestinal parasites. IL-13 exerts anti-inflammatory effects on monocytes and macrophages and it inhibits the expression of inflammatory cytokines such as IL-1beta, TNF-alpha, IL-6 and IL-8. IL-13 has also been shown to enhance B cell proliferation and to induce isotype switching, resulting in increased production of IgE. Blocking of IL-13 activity inhibits the pathophysiology of asthma. Human and murine IL-13 are cross-species reactive. Recombinant Rat IL-13 is an 11.9 kDa protein consisting of 109 amino acid residues.

Introduction to the Molecule

Interleukin-13 (IL-13) is a Th2-type cytokine, secreted from CD4(+) T cells, mast cells, basophils and eosinophils. It is an immunoregulatory cytokine. It has become evident that IL-13 is a key mediator in the pathogenesis of allergic inflammation. The important role of IL-13 in the pathogenesis of bronchial asthma as well as other allergic diseases has been recognized. Additionally, IL-13 plays a major role in various other inflammatory diseases including cancer.

Research topic

Animal studies, Cytokines and chemokines and related molecules

Amino Acid Sequence

VRRSTSPVVA LRELIEELSN ITQDQKTS LC NSSIVWSVDI TAGGFCAALE SLTNISSCNA IHRTQRILNG LCNQKASDVA
SSPPDTKIEV AQFISKLLNY SKQLFRYGH

Source

E. coli

Purity

98%

Biological Activity

The ED₅₀ as determined by the dose-dependant stimulation of the proliferation of human TF-1 cells is 40 ng/ml, corresponding to a specific activity of 2.5x10⁶ units/mg.

Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C.

Storage, Stability/Shelf Life

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