Datasheet

Cat. No. PH2014

Recombinant Human IL-13

Information

Accession #	AAK53823
Alternate Names	Human IL13; interleukin-13; IL13; IL-13; interleukin 13; MGC116786
Source	Human embryonic kidney cell, HEK293-derived human IL-13 protein
Protein sequence	Gly21-Asn132
M.Wt	13.3 kDa
Appearance	Solution protein.
Stability & Storage	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 °C as supplied.
Concentration	0. 2 mg/mL
Formulation	Dissolved in sterile PBS buffer.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The EC50 for this effect is 0.5-2.0 ng/mL.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

Purity	> 95%, determined by SDS-PAGE.
Endotoxin	<0.010 EU per 1 ug of the protein by the LAL method.

Description

Interleukin-13 (IL-13) is a monomeric 17 kDa immunoregulatory cytokine that plays a key role in the pathogenesis of allergy, cancer, and tissue fibrosis. It is secreted by several helper T cell subsets, NK cells, mast cells, eosinophils, basophils, and visceral smooth muscle cells [1-3]. Mature human IL-13 shares approximately 58% amino acid sequence identity with mouse and rat IL-13. Despite the low homology, it exhibits cross-species activity between human, mouse, and rat [4]. IL-13 suppresses the production of proinflammatory cytokines and other cytotoxic substances by macrophages, fibroblasts, and endothelial cells. On B cells, it promotes cellular activation, immunoglobulin class switching to IgE, and the up-regulation of CD23/Fc epsilon RII [1, 5]. IL-13 binds with low affinity to the transmembrane IL-13 R alpha 1 which then forms a signaling complex with the

transmembrane IL-4 R alpha [6-8]. This high affinity receptor complex also functions as the type 2 IL-4 receptor [6, 7]. IL-13 R alpha 2 inhibits responses to both IL-13 and IL-4. It binds IL-13 with high affinity [9, 10] and prevents IL-13 from signaling through the IL-13 R alpha 1/IL-4 R alpha complex [11, 12]. It also blocks signaling through IL-4-occupied IL-13 R alpha 1/IL-4 R alpha receptor complexes [12, 13]. In addition, IL-13-bound IL-13 R alpha 2 can directly promote tumor cell invasiveness and the development of tissue fibrosis [14-16].

Reference

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