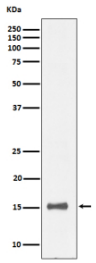
IL13 Antibody / Interleukin 13 [clone 31I25] (FY12644)

Catalog No.	Formulation	Size
FY12644	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31I25
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P35225
Applications	Western Blot : 1:500-1:2000
Limitations	This IL13 antibody is available for research use only.



Western blot analysis of IL13 expression in human recombinant protein cell lysate.

Description

IL13 antibody detects interleukin 13, a pleiotropic cytokine encoded by the IL13 gene. Interleukin 13 is secreted primarily by activated Th2 cells and plays an essential role in immune regulation, allergic inflammation, and tissue remodeling. It shares many structural and functional similarities with interleukin 4, including partial overlap in receptor usage. IL13

signals through a receptor complex composed of IL13R alpha 1 and IL4R alpha, activating the JAK STAT6 pathway, while IL13R alpha 2 functions as a decoy receptor that modulates signaling intensity. Through these pathways, IL13 regulates a broad range of immune and non immune processes, linking it to both protective and pathological responses.

IL13 antibody is widely applied in immunology, allergy, asthma, and fibrosis research. In allergic disease, IL13 promotes IgE class switching in B cells, mucus production in airway epithelial cells, and smooth muscle hyperreactivity, making it a central mediator of asthma pathogenesis. In chronic inflammation and fibrosis, IL13 drives collagen deposition and fibroblast activation, contributing to organ dysfunction in liver, lung, and skin. By detecting IL13, researchers can investigate how Th2 cytokines orchestrate immune responses and tissue remodeling in health and disease.

In western blot assays, IL13 antibody detects cytokine bands in supernatants from activated T cells. Immunohistochemistry reveals IL13 production in inflamed tissues such as asthmatic lung biopsies or fibrotic liver sections. Immunofluorescence highlights IL13 localization in immune cell clusters, while ELISA allows quantification of IL13 in serum, bronchoalveolar lavage fluid, or cell culture supernatants. Flow cytometry with IL13 antibody enables single cell analysis of cytokine producing lymphocyte subsets. These versatile methods ensure comprehensive assessment of IL13 biology.

IL13 is a critical therapeutic target. Monoclonal antibodies neutralizing IL13, such as lebrikizumab and tralokinumab, have shown clinical benefit in asthma and atopic dermatitis by reducing airway inflammation and skin lesions. Studies also link IL13 to ulcerative colitis, systemic sclerosis, and idiopathic pulmonary fibrosis. Detection with IL13 antibody supports both mechanistic studies of cytokine signaling and translational research evaluating therapeutic blockade. Its relevance across multiple diseases underscores the importance of accurate and sensitive IL13 detection.

In addition to its immunological roles, IL13 influences non immune systems. In epithelial biology, it alters barrier function and promotes goblet cell hyperplasia. In fibroblast biology, IL13 stimulates extracellular matrix production and myofibroblast differentiation. In cancer research, IL13 has been implicated in tumor progression, angiogenesis, and immune evasion. Tumor associated macrophages and cancer cells may exploit IL13 signaling to promote growth and suppress immune attack. These diverse functions expand the utility of IL13 antibody beyond allergy and immunology into oncology and regenerative medicine.

IL13 also contributes to host defense against helminth parasites. It induces smooth muscle contractility and mucus secretion, expelling parasites from the intestine. Together with IL4, IL13 coordinates type 2 immune responses against extracellular pathogens. However, the same pathways that confer protection can also drive pathology when dysregulated, as seen in chronic asthma and fibrosis. By applying IL13 antibody, scientists can study how this balance is maintained and disrupted in different biological contexts.

Research into IL13 signaling reveals intricate regulation. STAT6 activation downstream of IL13R alpha 1 and IL4R alpha induces transcription of genes controlling chemokine production, matrix deposition, and survival signals. Cross talk with TGF beta and other cytokines amplifies fibrotic pathways. Meanwhile, IL13R alpha 2 provides a regulatory check, functioning as a high affinity decoy receptor and in some contexts as a signaling molecule itself. This layered regulation highlights the complexity of IL13 activity and emphasizes the value of IL13 antibody for dissecting pathway interactions.

IL13 antibody from NSJ Bioreagents provides strong specificity and sensitivity for studying this critical cytokine. Its proven performance across immunological assays supports both basic research into cytokine networks and translational studies of therapeutic interventions. Whether applied to asthma, fibrosis, infection, or cancer models, IL13 antibody is a powerful reagent for advancing knowledge of type 2 immunity and disease mechanisms.

Application Notes

Optimal dilution of the IL13 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human IL13 was used as the immunogen for the IL13 antibody.

Storage

Store the IL13 antibody at -20oC.