

Human IL5 / Interleukin 5 Neutralizing Antibody



Sino Biological
Biological Solution Specialist

Catalog Number: 15673-R013

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General Information	
Immunogen:	Human IL-5 / Interleukin 5 Protein (Catalog#15673-HNCE)
Clone ID:	R013
Ig Type:	Rabbit IgG
Applications:	Neutralization, ELISA (Det)
Specificity:	Human IL5 / Interleukin 5
Formulation:	0.2 µm filtered solution in Histidine and Arginine buffer containing 120mM NaCl, 0.02% Tween 80, pH6.0
Storage:	< -20°C

Preparation

This antibody was obtained from a rabbit immunized with purified, Human IL5 / Interleukin 5 (Catalog#15673-HNCE; P05113; Ile20-Ser134) and was produced using recombinant antibody technology.

Specificity

Human IL-5 / Interleukin 5

Has cross-reactivity with mouse IL5 (Catalog#51068-M08B) in ELISA assay

Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free.**

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

Background

Interleukin 5 (IL-5) is a member of the interleukin family with length of 115 amino acids. Interleukins are a group of cytokines (secreted proteins / signaling molecules) that were first seen to be expressed by white blood cells (leukocytes) and has been found in a wide variety of body cells. Interleukin 5 or IL-5 is produced by T helper-2 cells and mast cells. It helps to stimulate B cell growth and increase immunoglobulin secretion and is considered as a key mediator in eosinophil activation. Interleukin 5 (IL-5) has long been associated with several allergic diseases, including allergic rhinitis and asthma. Growth in the number of circulating, airway tissue, and induced sputum eosinophils have been observed in patients with these diseases. IL-5 also had something with the terminally differentiated granulocyte eosinophils. IL-5 was originally found as an eosinophil colony stimulating factor. It has been proved to be a major regulator of eosinophil accumulation in tissues, and can modulate eosinophil behavior at every stage from maturation to survival.

Reference

1. Milburn MV, et al. (1993) A novel dimer configuration revealed by the crystal structure at 2.4 Å resolution of human interleukin-5. *Nature*. 363(6425): 172-176.
2. Lee JS, et al. (1989) The IL-4 and IL-5 genes are closely linked and are part of a cytokine gene cluster on mouse chromosome 11. *Somat Cell Mol Genet*. 15(2): 143-152.
3. Woodcock JM, et al. (1994) Three residues in the common beta chain of the human GM-CSF, IL-3 and IL-5 receptors are essential for GM-CSF and IL-5 but not IL-3 high affinity binding and interact with Glu21 of GM-CSF. *EMBO J*. 13 (21): 5176-85.

Character	Method	Result
Specificity	ELISA	Human IL-5 / Interleukin 5 Protein (Catalog#15673-HNCE)
Antibody concentration	UV	> 1 mg/mL
Aggregation	SEC-HPLC	< 5% aggregation
Purity	SDS-PAGE	> 95%
Endotoxin	LAL gel clotting	< 3 EU/mg

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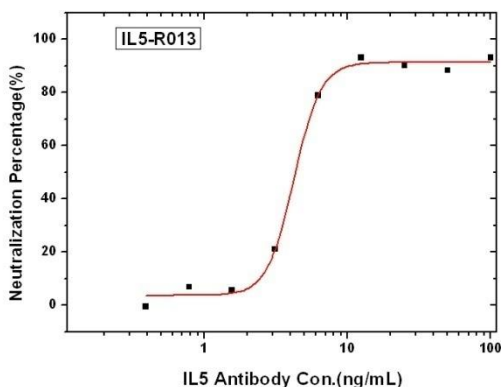
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Applications

Block – In a functional ELISA which immobilized Human IL5 (Catalog#15673-HNCE) at 0.4 µg/mL (100 µL/well) in the plate, the Rabbit anti-Human IL5 Monoclonal Antibody (Catalog#15673-R013) can block the binding of 2 µg/mL Human IL5R (Catalog#10392-H08H) to human IL5, the EC50 is 0.23 µg/mL.

Neutralization – The neutralization activity of IL5 neutralizing antibody is measured by its ability to neutralize IL5-induced proliferation in the TF-1 human erythroleukemic cell line. The Neutralization Dose (ND50) is typically 2-8 ng/mL in the presence of 1.25 ng/mL Human IL5 (Catalog#15673-HNCE).



Cell Proliferation Induced by IL-5 and Neutralization by Human IL5 Antibody. Human IL5 (Catalog#15673-HNCE) stimulates proliferation in the TF-1 human erythroleukemic cell line. Proliferation elicited by Recombinant Human IL5 (1.25 ng/mL) is neutralized by increasing concentrations of Rabbit Anti-Human IL-5 Monoclonal Antibody (Catalog#15673-R013). The ND50 is typically 2-8 ng/mL.

ELISA(Det): 0.1-1 µg/ml

This antibody will detect Human IL-5/IL5 / Interleukin 5 in ELISA pair set (Catalog: # SEKA15673). In a sandwich ELISA, it can be used as detection antibody when paired with (Catalog: # 15673-R001).