# biotechne

## Human IL-5 Rα/CD125 Antibody

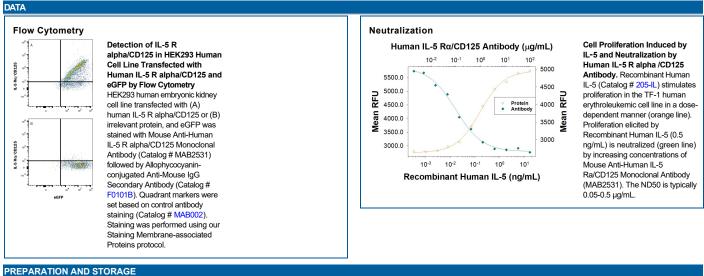
Monoclonal Mouse IgG<sub>1</sub> Clone # 1036601 Catalog Number: MAB2531

### RDSYSTEMS

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human IL-5 Rα/CD125 in direct ELISAs.
Source	Monoclonal Mouse IgG <sub>1</sub> Clone # 1036601
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	S. <i>frugiperda</i> insect ovarian cell line <i>Sf</i> 21-derived recombinant human IL-5 Rα/CD125 Asp21-Arg335 Accession # O08665
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

#### APPLICATIONS

	Recommended Concentration	Sample
Flow Cytometry	0.25 μg/10 <sup>6</sup> cells	HEK293 Human Cell Line Transfected with Human IL-5 R alpha/CD125 and eGFP
Neutralization	Measured by its ability to neutralize IL-5-induced proliferation in the TF-1 human erythroleukemic cell line. Kitamura T. et al. (1989) J. Cell Physiol. 140:323. The Neutralization Dose (ND50) is typically 0.05-0.5 μg/mL in the presence of 0.5 ng/mL Recombinant Human IL-5.	



Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.	
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C	
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.	
	<ul> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> </ul>	
	<ul> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> </ul>	
	<ul> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>	

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956 USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373 Europe | Middle East | Africa TEL +44 (0)1235 529449

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Monoclonal Mouse IgG<sub>1</sub> Clone # 1036601 Catalog Number: MAB2531

## BACKGROUND

**R**Dsystems

Interleukin 5, produced primarily by activated T cells and mast cells, has diverse biological effects on a variety of cell types. Human IL-5 is a potent eosinophil differentiation and activation factor *in vivo* and *in vitro*. Additionally, it has also been reported that IL-5 can stimulate the proliferation and/or differentiation of basophils and B cells. The multiple effects of IL-5 are mediated by binding of the cytokine to specific cell surface receptors expressed on target cells. As is the case with many other cytokines, the functional high-affinity receptor for IL-5 is a complex consisting of a ligand binding subunit ( $\alpha$  chain) and a second subunit ( $\beta$  chain) that can modulate the ligand binding affinity of the receptor complex. In the case of IL-5, the  $\beta$  subunit is shared with the high affinity receptor complexes for IL-3 and GM-CSF. The  $\beta$  chain does not bind any of the cytokines in question but is indispensable for the cytokine-mediated signaling. cDNA clones for the  $\alpha$  chain (IL-5 R $\alpha$ ) of both the mouse and human high affinity IL-5 receptor complexes have been isolated. Human and mouse IL-5 R $\alpha$  are both members of the hematopoietin receptor superfamily characterized by the presence of the WSXWS, and a four cysteine residue motif in the extracellular domain of the transmembrane protein. In addition to the cDNA clone encoding the full-length transmembrane protein, cDNA clones that arise from alternative splicing and that encode soluble secreted forms of IL-5 R $\alpha$  have been isolated from mouse as well as human cells. A naturally-occurring soluble form of the IL-5 R $\alpha$  has been detected in biological fulls of autoimmune-prone mice and mice bearing chronic B cell leukemia (BCL<sub>1</sub>). A recombinant human IL-5 soluble receptor  $\alpha$  has been shown to bind the human IL-5 dimer in a 1:1 ratio and acts as a human IL-5 antagonist. This molecule inhibits the proliferation of IL-5-dependent cell lines and blocks human umbilical cord blood eosinophil differentiation.

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