

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-5 R α /CD125 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 1036601
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IL-5 R α /CD125 Asp21-Arg335 Accession # O08665
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

Flow Cytometry Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Samples used for this experiment was HEK293 Human Cell Line Transfected with Human IL-5 R alpha/CD125 and eGFP

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage **Protect from light. Do not freeze.**

- 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

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 (α chain) and a second subunit (β chain) that can modulate the ligand binding affinity of the receptor complex. In the case of IL-5, the β subunit is shared with the high affinity receptor complexes for IL-3 and GM-CSF. The β chain does not bind any of the cytokines in question but is indispensable for the cytokine-mediated signaling. cDNA clones for the α chain (IL-5 R α) of both the mouse and human high affinity IL-5 receptor complexes have been isolated. Human and mouse IL-5 R α 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 α have been isolated from mouse as well as human cells. A naturally-occurring soluble form of the IL-5 R α has been detected in biological fluids of autoimmune-prone mice and mice bearing chronic B cell leukemia (BCL₁). A recombinant human IL-5 soluble receptor α 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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