

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-3 R α /CD123 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human IL-3 R α and recombinant mouse IL-3 R β is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 151231
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse IL-3 R α /CD123 Ser17-Lys331 Accession # P26952
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose.

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.

	Recommended Concentration	Sample
Western Blot	1 μ g/mL	Recombinant Mouse IL-3 R α /CD123 Fc Chimera (Catalog # 983-MR)
Flow Cytometry	0.25 μ g/10 ⁶ cells	Mouse splenocytes
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

PREPARATION AND STORAGE

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.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Interleukin 3 (IL-3) is a pleiotropic cytokine produced primarily by activated T cells or mast cells. IL-3 stimulates the proliferation and differentiation of hemopoietic cells including the pluripotent hematopoietic stem cells as well as various lineage-committed cells. The biological effects of IL-3 on the various cell types are mediated by the binding of IL-3 to specific cell surface receptor complexes. The functional high-affinity IL-3 receptor is a heterodimer consisting of a ligand binding α subunit and the β subunit. The α subunit alone binds IL-3 with low affinity. The β subunit is required for the high-affinity binding of IL-3 to the heterodimeric receptor complex. The β subunit has also been found to be a component of the high-affinity receptor complex for IL-5 and GM-CSF and is also referred to as the β common (β c) chain. In the mouse, there are two IL-3 R β proteins. The first identified mouse IL-3 R β was also called AIC2A and binds IL-3 with low affinity (1). The second mIL-3 R β was referred to as AIC2B (2). AIC2B doesn't bind IL-3 and is the homolog of the human IL-3 R β . AIC2A was found to be the result of a gene duplication event. The mouse IL-3 R α , also called SUT-1, will form complexes with either mouse IL-3 R β protein (3). Both the α and the β subunits are members of the cytokine receptor superfamily.

References:

1. Itoh, N. *et al.* (1990) *Science* **247**:324.
2. Gorman, D.M. *et al.* (1990) *Proc. Natl. Acad. Sci. USA* **87**:5459.
3. Hara, T. and A. Miyajima (1992) *EMBO J.* **11**:1875.
4. Schrader, J.W. (2001) *Cytokine Reference*, Oppenheim, J.J. and M. Feldmann, eds, Academic Press, New York, p. 1899.