

DESCRIPTION

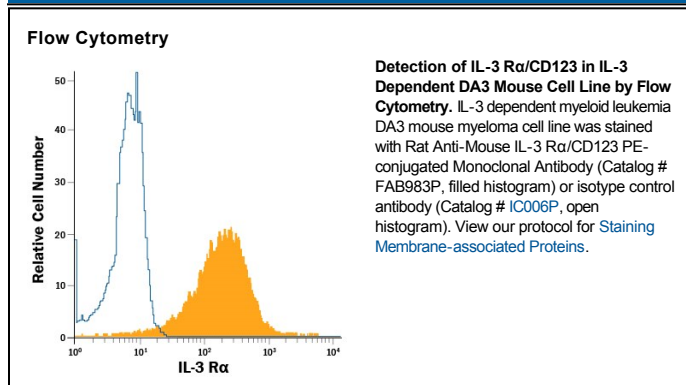
Species Reactivity	Mouse
Specificity	Detects mouse IL-3 R α /CD123 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human IL-3 R α and recombinant mouse IL-3 R β is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 151231
Purification	Protein 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
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

	Recommended Concentration	Sample
Flow Cytometry	10 μ L/10 ⁶ cells	See Below

DATA



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 3 (IL-3) is a cytokine produced primarily by activated T cells or mast cells. IL-3 stimulates the proliferation and differentiation of hematopoietic cells including 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 a specific cell surface receptor complex. The functional high-affinity IL-3 receptor is a heterodimer consisting of a ligand binding α subunit and a 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). The α subunit is a member of the type I cytokine receptor family, type 5 subfamily (4,5). The mouse IL-3 R α extracellular domain (ECD) shares 42% and 29% amino acid sequence identity with rat and human IL-3 R α ECD, respectively.

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. Broughton, S.E. *et al.* (2012) *Immunol. Rev.* **250**:277.
5. Broughton, S.E. *et al.* (2015) *Cytokine* **74**:247.