

## DESCRIPTION

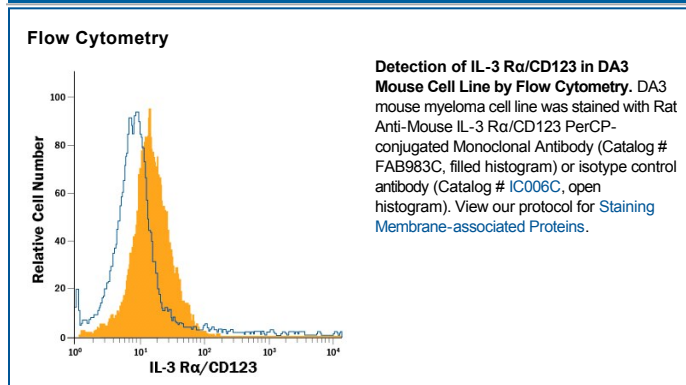
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse IL-3 R $\alpha$ in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human IL-3 R $\alpha$ and recombinant mouse IL-3 R $\beta$ is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 151231
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse IL-3 R $\alpha$ Ser17-Lys331 Accession # P26952
<b>Conjugate</b>	PerCP (Peridinin-chlorophyll Protein Complex) Excitation Wavelength: 482 and 564 nm Emission Wavelength: 675 nm
<b>Formulation</b>	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
<b>Flow Cytometry</b>	10 $\mu$ L/10 <sup>6</sup> 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 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  $\alpha$  subunit and the  $\beta$  subunit. The  $\alpha$  subunit alone binds IL-3 with low affinity. The  $\beta$  subunit is required for the high-affinity binding of IL-3 to the heterodimeric receptor complex. The  $\beta$  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  $\beta$  common ( $\beta$ c) chain. In the mouse, there are two IL-3 R $\beta$  proteins. The first identified mouse IL-3 R $\beta$  was also called AIC2A and binds IL-3 with low affinity (1). The second mIL-3 R $\beta$  was referred to as AIC2B (2). AIC2B doesn't bind IL-3 and is the homolog of the human IL-3 R $\beta$ . AIC2A was found to be the result of a gene duplication event. The mouse IL-3 R $\alpha$ , also called SUT-1, will form complexes with either mouse IL-3 R $\beta$  protein (3). Both the  $\alpha$  and the  $\beta$  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.