

## DESCRIPTION

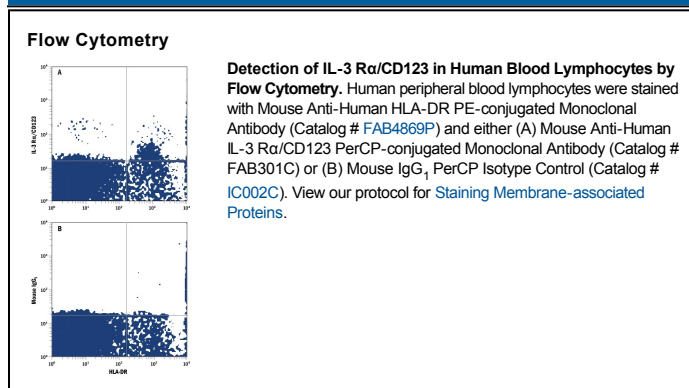
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-3 R $\alpha$ /CD123 in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 32703
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IL-3 R $\alpha$ /CD123 Lys20-Arg305, predicted Accession # P26951
<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

IL-3 is a pleiotropic cytokine that can stimulate proliferation and differentiation of pluripotent hematopoietic stem cells as well as various lineage committed progenitors (1, 2). IL-3 exerts its activity through binding to a specific cell surface receptor known as IL-3 R. IL-3 R is a heterodimeric structure composed of a 70 kDa IL-3 R $\alpha$  subunit (CD123) and a 120-140 kDa IL-3 R $\beta$  subunit (CD131) (3, 4). IL-3 R $\alpha$  binds IL-3 with relatively low affinity. In the presence of IL-3 R $\beta$ , however, IL-3 R $\alpha$  has a much higher affinity for IL-3. It is not clear how signal transduction occurs following IL-3 binding. The IL-3 R $\alpha$  chain has a very short intracellular domain while the IL-3 R $\beta$  chain has a very large cytoplasmic domain. The IL-3 R $\beta$  chain is also shared by the receptors for IL-5 and GM-CSF. Cells known to express IL-3 receptors include hematopoietic progenitors, epithelial cells, double negative T cells, mast cells, basophils and blood monocytes (5).

### References:

1. Moore, M.A.S. *et al.* (1991) *Blood* **72**:944.
2. Warren, D.J. *et al.* (1988) *J. Immunol.* **140**:94.
3. Plant M. *et al.* (1989) *Nature* **339**:150.
4. Budel, L.M. *et al.* (1990) *Blood* **75**:1439.
5. Schrader, J.W. *et al.* (1988) In *Interleukin-3: The Panspecific hemopoietin* (ed. J.W. Schrader), Academic Press, San Diego, CA.