

DESCRIPTION

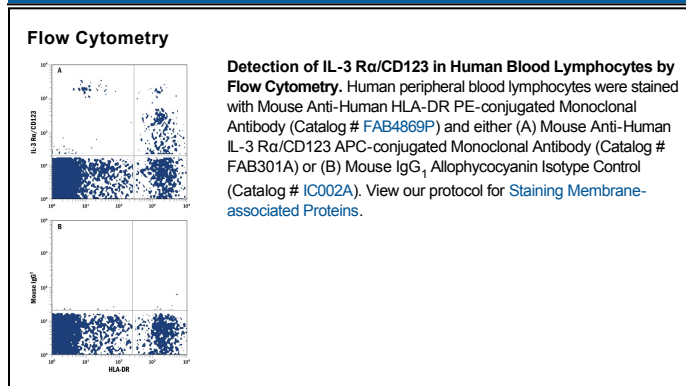
Species Reactivity	Human
Specificity	Detects human IL-3 R α /CD123 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 32703
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IL-3 R α /CD123 Lys20-Arg305, predicted Accession # P26951
Conjugate	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 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. <ul style="list-style-type: none"> 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 α subunit (CD123) and a 120-140 kDa IL-3 R β subunit (CD131) (3, 4). IL-3 R α binds IL-3 with relatively low affinity. In the presence of IL-3 R β , however, IL-3 R α has a much higher affinity for IL-3. It is not clear how signal transduction occurs following IL-3 binding. The IL-3 R α chain has a very short intracellular domain while the IL-3 R β chain has a very large cytoplasmic domain. The IL-3 R β 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:

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