

DESCRIPTION

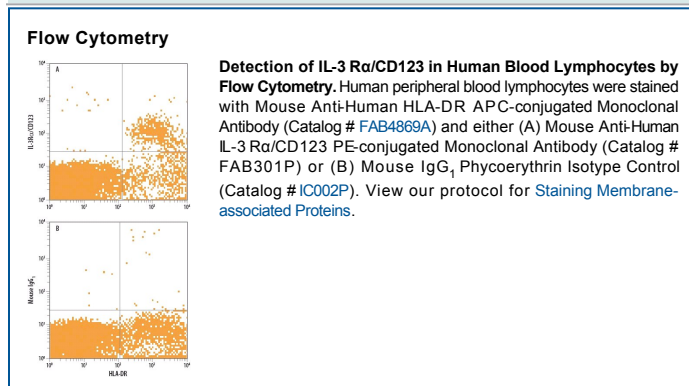
| | |
|---------------------------|--|
| Species Reactivity | Human |
| Specificity | Detects human IL-3 R α in direct ELISAs and Western blots. |
| Source | Monoclonal Mouse IgG ₁ Clone # 32703 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | <i>S. frugiperda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

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.