Human IL-3 Rα/CD123 Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 32703

Catalog Number: FAB301G
100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-3 Rα/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	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human IL-3 Rα/CD123 Lys20-Arg305, predicted Accession # P26951
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

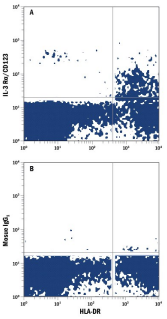
APPLICATIONS

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	5 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of IL-3 Rα/CD123 in Human Blood Lymphocytes by Flow Cytometry. Human peripheral blood lymphocytes were stained with Mouse Anti-Human HLA-DR PE-conjugated Monoclonal Antibody (Catalog # FAB4869P) and either (A) Mouse Anti-Human IL-3 Rα/CD123 Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # FAB301G) or (B) Mouse IgG_1 Alexa Fluor 488 Isotype Control (Catalog # IC002G). View our protocol for Staining Membrane-associated Proteins.

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 Rα subunit (CD123) and a 120-140 kDa IL-3 Rβ subunit (CD131) (3, 4). IL-3 Rα binds IL-3 with relatively low affinity. In the presence of IL-3 Rβ, however, IL-3 Rα has a much higher affinity for IL-3. It is not clear how signal transduction occurs following IL-3 binding. The IL-3 Rα chain has a very short intracellular domain while the IL−3 Rβ chain has a very large cytoplasmic domain. The IL−3 Rβ 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.

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