Technical Data Sheet

Purified NA/LE Mouse Anti-Human CD123

Product Information

Material Number:	**554526**
Alternate Name:	IL3RA; IL-3RA; IL-3Fα; IL-3R-alpha; Interleukin-3 receptor subunit alpha
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	7G3
Immunogen:	Human IL-3Ra-transfected cells
Isotype:	Mouse IgG2a, κ
Reactivity:	QC Testing: Human
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2μm sterile filtered. Endotoxin level is ≤0.01 EU/μg (≤0.001 ng/μg) of protein as determined by the LAL assay.

Description

The 7G3 monoclonal antibody specifically reacts with human CD123, the 70 kD IL-3 receptor α chain (IL-3Rα), which associates with the 120-140 kD β subunit. The β chain is shared with the receptors for interleukins IL-5 and GM-CSF. IL-3Rα is expressed on hematopoietic progenitors and plays an important role in hematopoietic progenitor cell growth and differentiation. It is also expressed by mast cells, macrophages and a CD5+ B cell subset. This antibody has been reported to block the binding of 125I-IL-3 to high and low affinity IL-3 receptors. In functional experiments, this antibody was found to inhibit acute myeloid leukemia cell proliferation, basophil histamine release, endothelial cell-mediated IL-8 secretion, and neutrophil transmigration. This antibody has been reported to be useful for immunoprecipitation, Western blot and immunofluorescent staining for flow cytometry. At the Fifth HLDA Workshop, the human IL-3 receptor was designated CD123.

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

Flow cytometry	Routinely Tested
Neutralization	Reported

Recommended Assay Procedure:

This antibody has been found to block the binding of 125I-IL-3 to high and low affinity IL-3 receptors and can neutralize IL-3 bioactivity. In a TF-1 cell proliferation assay, this antibody (at ~0.5 μg/ml) was found to inhibit by 50% the proliferation induced by 0.3 ng/ml (~1 U/ml) of human IL-3. In functional experiments, the 7G3 antibody was found to inhibit acute myeloid leukemia cell proliferation, basophil histamine release, endothelial cell-mediated IL-8 secretion, and neutrophil transmigration. In various formats, i.e., purified with azide (Cat. No. 554527), biotinylated (Cat. No. 554528), and phycoerythrin-labeled (Cat. No. 554529), the 7G3 antibody is useful for applications such as immunoprecipitation, Western blotting, and immunofluorescent labeling of cells for flow cytometric analysis.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554645	Purified NA/LE Mouse IgG2a, κ Isotype Control	0.5 mg	G155-178

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Schlossman SF, Boumsell L, Gilks W, et al, ed. *Leukocyte Typing V: White Cell Differentiation Antigens.* New York: Oxford University Press; 1995. (Clone-specific)

Sun Q, Woodcock JM, Rapoport A, et al. Monoclonal antibody 7G3 recognizes the N-terminal domain of the human interleukin-3 (IL-3) receptor alpha-chain and functions as a specific IL-3 receptor antagonist. *Blood.* 1996; 87(1):83-92. (Immunogen: Blocking, Immunoprecipitation, Neutralization, Western blot)

Zola H. Detection of cytokine receptors by flow cytometry. In: Coligan JE, Kruisbeek AM, Margulies DH, Shevach EM, Strober W, ed. *Current Protocols in Immunology.* New York: Green Publishing Associates and Wiley-Interscience; 1995:6.21.1-6.21.18. (Clone-specific: Flow cytometry)

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