Technical Data Sheet

Purified Mouse Anti-Human CD123

Product Information

Material Number:	**554527**
Alternate Name:	IL-3 Receptor α chain
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	7G3
Immunogen:	Human IL-3Ra-transfected cells
Isotype:	Mouse IgG2a, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

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. 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.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4° C.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunoprecipitation	Reported
Western blot	Reported
Blocking	Reported
Neutralization	Reported

Recommended Assay Procedure:

Flow cytometry: This antibody has been tested by immunofluorescent staining (≤ 1 µg/million cells) with flow cytometric analysis to assure specificity and reactivity. For flow cytometric applications, a three step labeling procedure is recommended for amplifying signal.

Blocking: 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. For neutralization studies we recommend our no sodium azide and low endotoxin (NA/LE) format (Cat. No. 554526).

Suggested Companion Products

Catalog Number	Name	Size	Clone
555571	Purified Mouse IgG2a, κ Isotype Control	0.1 mg	G155-178
553999	Biotin Goat Anti-Mouse Ig	0.5 mg	Polyclonal
554061	PE Streptavidin	0.5 mg	(none)

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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.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

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)