

Technical Data Sheet

Biotin Mouse Anti-Human CD124

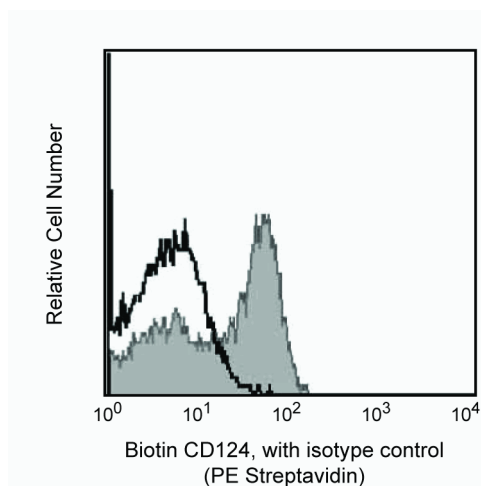
Product Information

Material Number:	552120
Alternate Name:	IL-4 Receptor α Chain
Size:	100 tests
Vol. per Test:	20 μ l
Clone:	hIL4R-M57
Immunogen:	Soluble Human IL-4 Receptor
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.

Description

The hIL4R-M57 antibody specifically binds to the α subunit (IL-4R α) of the human Interleukin-4 Receptor complex which is also known as CD124. The human IL-4R α , also known as B cell stimulatory factor 1 receptor (BSF-1 receptor), is a 140 kDa transmembrane glycoprotein that is expressed by B and T lymphocytes and a variety of other hematopoietic and non-hematopoietic cells and cell lines. The cell surface IL-4R α chain binds IL-4 with high affinity and associates with either the common γ chain (IL-4R α/γ ; aka, type I IL-4R complex) or the IL-13 receptor alpha-1 subunit (IL-4R α /IL-13R α 1; aka, type II IL-4R complex) to form two distinct types of signal-transducing IL-4R complexes. The type I IL-4 receptor complex specifically binds IL-4 whereas the type II IL-4R complex binds and transduces signals from either IL-4 or IL-13. A truncated form of the IL-4R α exists in soluble form in biological fluids. In contrast to mice, in humans no distinct mRNA coding for sIL-4R has been described, suggested that human sIL-4R is exclusively produced by proteolytic cleavage of the cell surface receptor. The serum levels of soluble IL-4R α appear to elevate in pathological situations such as allergy and parasitic infections. Depending on the ratios of IL-4 and sIL-4R α present in the local milieu, the sIL-4R α may augment or antagonize the activities of IL-4. The immunogen used to generate the hIL4R-M57 hybridoma was soluble human IL-4R.

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.



Expression of surface CD124 (IL-4R α) by human PBMC. Human PBMC isolated by density gradient centrifugation (Ficoll-Paque™) were blocked with normal polyclonal human IgG and stained with biotinylated hIL4R-M57 (20 μ l/10⁶ cells) followed by streptavidin phycoerythrin (0.015 μ g, Cat. No. 554061). Staining with the hIL4R-M57 antibody (filled histograms) is compared to staining obtained using the isotype control antibody (open histograms). The overlapping histograms are displayed for gated CD19 positive lymphocytes. Note: Certain human cell lines or cell types (e.g., neutrophils and monocytes) can first be treated with reagents that block receptors for the Fc regions of immunoglobulin to avoid nonspecific immunofluorescent staining mediated by Fc receptors.

Preparation and Storage

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

The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

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Application Notes

Application

Flow cytometry	Routinely Tested
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Recommended Assay Procedure:

Immunofluorescent Staining and Flow Cytometric Analysis: The biotinylated form of hIL4R-M57 antibody can be used for the immunofluorescent staining (20 μ l/10⁶ cells) and flow cytometric analysis of human nucleated cells to measure their expressed levels of surface IL-4R α . An appropriate purified immunoglobulin isotype control is clone MOPC-21 (Cat. No. 555747).

Suggested Companion Products

Catalog Number	Name	Size	Clone
555747	Biotin Mouse IgG1 κ Isotype Control	100 tests	MOPC-21
554061	PE Streptavidin	0.5 mg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 X 10⁶ cells in a 100- μ l experimental sample (a test).
3. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
4. 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.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. Ficoll-Paque is a trademark of Amersham Biosciences Limited.

References

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