Technical Data Sheet

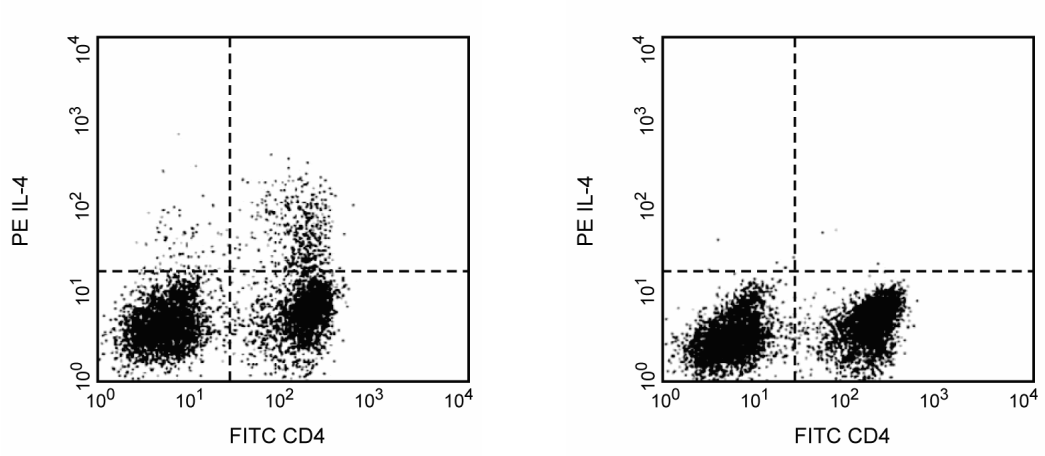
PE Rat Anti-Mouse IL-4

Product Information

Material Number:	**562044**
Size:	25 µg
Concentration:	0.2 mg/ml
Clone:	11B11
Immunogen:	Partially Purified Mouse IL-4
Isotype:	Rat IgG1
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 11B11 antibody reacts with mouse interleukin-4 (IL-4). The immunogen used to generate the 11B11 hybridoma was partially purified mouse IL-4 from PMA-stimulated EL-4 supernatant. The purified or unconjugated form of this antibody has been reported to be neutralizing.



Expression of IL-4 by stimulated CD4+ and CD4-BALB/c spleen cells. *BALB/c spleen cells were cultured for 72 h in medium containing Staphylococcus aureus enterotoxin B (2 µg/ml; Sigma, St. Louis, MO), recombinant mouse IL-2 (10 U/ml, Cat. No. 550069) and recombinant mouse IL-4 (2 ng/ml, Cat. No. 550067). The cells were harvested and restimulated for 5 h with anti-CD3 (145-2C11, Cat. No. 553057 at 2 µg/ml) and anti-CD28 (clone 37.51, Cat. No. 553294 at 2 µg/ml) antibodies in the presence of 3 µM monensin (BD GolgiStop, Cat No. 554704). The splenocytes were then stained with 0.25 µg of FITC-conjugated rat anti-mouse CD4 (FITC-RM4-5, Cat. No. 553047) and 0.25 µg of PE Rat anti-Mouse IL-4 by using the Pharmingen staining protocol (left panel). To demonstrate staining specificity, the binding of PE-11B11 was blocked by the preincubation of the conjugated antibody with excess recombinant mouse IL-4 (0.25 µg; Cat. No. 550067) (right panel) or by pre-blocking fixed/permeabilized cells with excess purified 11B11 mAb (5.0 µg; Cat. No. 554433) (data not shown). The quadrant markers for the bivariate dot plots were set based on the autofluorescence control, and verified using the cytokine-blocking or mAb blocking controls.*

Preparation and Storage

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

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

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554685	PE Rat IgG1, κ Isotype Control	0.1 mg	R3-34
550069	Recombinant Mouse IL-2	20 µg	(none)
550067	Recombinant Mouse IL-4	10 µg	(none)
553294	Purified NA/LE Hamster Anti-Mouse CD28	0.5 mg	37.51

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553057	Purified NA/LE Hamster Anti-Mouse CD3e	0.5 mg	145-2C11
554715	BD Cytofix/Cytoperm Plus Kit (with BD GolgiStop)	250 tests	(none)
554653	MiCK-2 Mouse Cytokine Positive Control Cells	1.0 ml	(none)

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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
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. An isotype control should be used at the same concentration as the antibody of interest.

References

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Assenmacher M, Schmitz J, Radbruch A. Flow cytometric determination of cytokines in activated murine T helper lymphocytes: expression of interleukin-10 in interferon-gamma and in interleukin-4-expressing cells. *Eur J Immunol.* 1994; 24(5):1097-1101. (Clone-specific: Flow cytometry)

Haak-Frendscho M, Brown JF, Iizawa Y, Wagner RD, Czuprynski CJ. Administration of anti-IL-4 monoclonal antibody 11B11 increases the resistance of mice to Listeria monocytogenes infection. *J Immunol.* 1992; 148(12):3978-3985. (Clone-specific: Neutralization)

Ohara J, Paul WE. Production of a monoclonal antibody to and molecular characterization of B-cell stimulatory factor-1. *Nature.* 1985; 315(6017):333-336. (Immunogen)

Openshaw P, Murphy EE, Hosken NA, et al. Heterogeneity of intracellular cytokine synthesis at the single-cell level in polarized T helper 1 and T helper 2 populations. *J Exp Med.* 1995; 182(5):1357-1367. (Clone-specific: Flow cytometry)

Prussin C, Metcalfe DD. Detection of intracytoplasmic cytokine using flow cytometry and directly conjugated anti-cytokine antibodies. *J Immunol Methods.* 1995; 188(1):117-128. (Methodology)

Sadick MD, Heinzel FP, Holaday BJ, Pu RT, Dawkins RS, Locksley RM. Cure of murine leishmaniasis with anti-interleukin 4 monoclonal antibody. Evidence for a T cell-dependent, interferon gamma-independent mechanism. *J Exp Med.* 1990; 171(1):115-127. (Clone-specific: Neutralization)

Sander B, Andersson J, Andersson U. Assessment of cytokines by immunofluorescence and the paraformaldehyde-saponin procedure. *Immunol Rev.* 1991; 119:65-93. (Clone-specific: ELISA, Flow cytometry)

Sander B, Hoiden I, Andersson U, Moller E, Abrams JS. Similar frequencies and kinetics of cytokine producing cells in murine peripheral blood and spleen. Cytokine detection by immunoassay and intracellular immunostaining. *J Immunol Methods.* 1993; 166(2):201-214. (Clone-specific: ELISA, Flow cytometry, Neutralization)