Datasheet for ABIN967463

anti-IL-4 antibody

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Overview

Quantity:	0.1 mg
Target:	IL-4 (IL4)
Reactivity:	Human
Host:	Rat
Clonality:	Monoclonal
Conjugate:	This IL-4 antibody is un-conjugated
Application:	Western Blotting (WB), Blocking Antibody (Inhibition)

Product Details

Brand:	BD Pharmingen™
Immunogen:	Purified Recombinant Human IL-4
Clone:	MP4-25D2
Isotype:	IgG1
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us 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.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	IL-4 (IL4)
Alternative Name:	IL-4 (IL4 Products)
Background:	The MP4-25D2 antibody reacts with human interleukin-4 (IL-4). The immunogen used to generate the MP4-25D2 hybridoma was purified recombinant human IL-4. This is a neutralizing antibody. The MP4-25D2 antibody has been reported to cross react with IL-4 from rhesus monkeys. The use of the MP4-25D2 antibody for epitope mapping of human IL-4 has been described. This antibody is routinely tested as a blocking control for intracellular staining.
Pathways:	JAK-STAT Signaling, Regulation of Leukocyte Mediated Immunity, Positive Regulation of Immune Effector Process, Production of Molecular Mediator of Immune Response, Proton Transport, Activated T Cell Proliferation

Application Details

Application Notes:	1. Blocking Control for Intracellular Staining: The unlabeled MP4-25D2 antibody can be used as a blocking control to demonstrate specificity of IL-4 staining by conjugated MP4-25D2 antibody. To perform this control, the fixed/permeabilized cells (~ 1 million) can be incubated with 1-10 µg of unlabeled MP4-25D2 antibody (ABIN967463) for 20 minutes at 4°C, prior to staining with conjugated MP4-25D2 antibody. The intracellular cytokine staining technique and use of blocking controls are described in detail by C. Prussin and D. Metcalfe. 2. Neutralization: The NA/LE™ MP4-25D2 antibody is useful for neutralization of human IL-4 bioactivity. A suitable NA/LE ™ rat IgG1 isotype control to match the MP4-25D2 antibody is the R3-34 antibody. 3. WB: The purified MP4-25D2 antibody has been reported to be useful for Western blotting. Please note that this application is not routinely tested.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.5 mg/mL
Buffer:	Aqueous buffered solution containing ≤0.09 % sodium azide.

Handling

Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4° C.

Publications

Product cited in:

Prussin, Metcalfe: "Detection of intracytoplasmic cytokine using flow cytometry and directly conjugated anti-cytokine antibodies." in: **Journal of immunological methods**, Vol. 188, Issue 1, pp. 117-28, (1996) (PubMed).

Jung, Schauer, Rieger, Wagner, Einsle, Neumann, Heusser: "Interleukin-4 and interleukin-5 are rarely co-expressed by human T cells." in: **European journal of immunology**, Vol. 25, Issue 8, pp. 2413-6, (1995) (PubMed).

Ramanathan, Ingram, Sullivan, Greenberg, Reim, Trotta, Le: "Immunochemical mapping of domains in human interleukin 4 recognized by neutralizing monoclonal antibodies." in: **Biochemistry**, Vol. 32, Issue 14, pp. 3549-56, (1993) (PubMed).

Abrams, Roncarolo, Yssel, Andersson, Gleich, Silver: "Strategies of anti-cytokine monoclonal antibody development: immunoassay of IL-10 and IL-5 in clinical samples." in: **Immunological reviews**, Vol. 127, Issue 9-10, pp. 5-24, (1992) (PubMed).

Chrétien, Van Kimmenade, Pearce, Banchereau, Abrams: "Development of polyclonal and monoclonal antibodies for immunoassay and neutralization of human interleukin-4." in: **Journal of immunological methods**, Vol. 117, Issue 1, pp. 67-81, (1989) (PubMed).

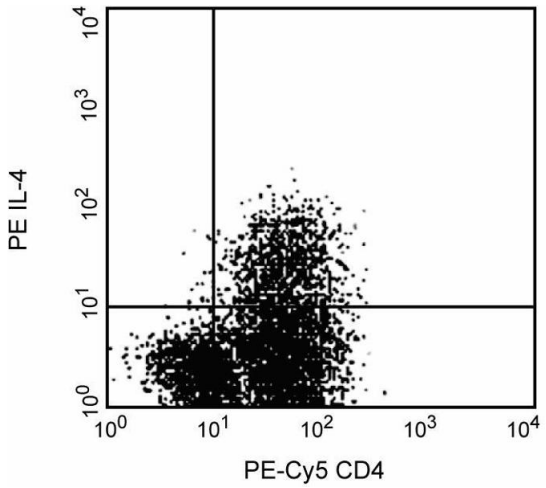
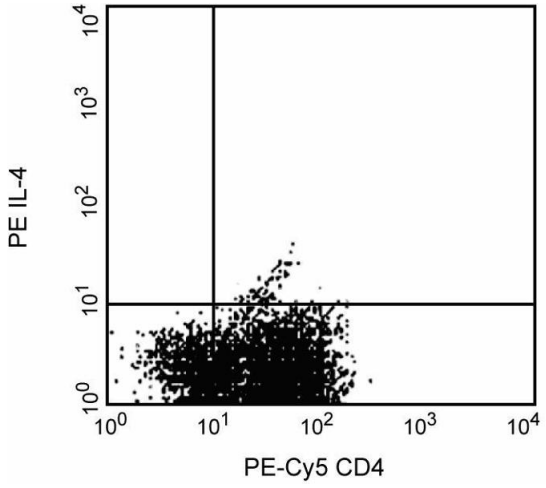


Image 1. Expression of IL-4 by stimulated human peripheral blood mononuclear cells (PBMC). Human PBMC were stimulated with soluble anti-human CD3 antibody (1 µg/ml), recombinant human IL-2 (10 ng/ml) and IL-4 (20 ng/ml) for 2 days. The cells were subsequently cultured in medium containing recombinant human IL-2 and recombinant human IL-4 for 3 days. Finally, the cells were harvested and stimulated for 6 h with PMA (Sigma) and calcium ionophore A23187 (Sigma) in the presence of 2 µM GolgiStop™. The cells were harvested, stained with PE-Cy™5 -anti CD4, fixed, permeabilized, and subsequently stained with 0.05 µg of PE-rat anti-human IL-4 antibody (PE-MP4-25D2) by using Pharmingen's staining protocol (first panel). To demonstrate specificity of staining, the binding of PE-MP4-25D2 antibody was blocked by preincubation of the fixed/permeabilized cells with unlabeled MP4-25D2 antibody (2.5 µg, ABIN967463, second panel) prior to staining. The quadrant markers for the bivariate dot plot were set based on the autofluorescence controls and verified using unlabeled antibody blocking controls.



Flow Cytometry

Image 2. The binding of PE-MP4-25D2 antibody was blocked by preincubation of the fixed/permeabilized cells with unlabeled MP4-25D2 antibody (2.5 µg, ABIN967463, second panel) prior to staining.