Datasheet for ABIN967465

anti-GM-CSF antibody

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Overview

Quantity:	0.1 mg
Target:	GM-CSF (CSF2)
Reactivity:	Human
Host:	Rat
Clonality:	Monoclonal
Conjugate:	This GM-CSF antibody is un-conjugated
Application:	Western Blotting (WB), Immunoprecipitation (IP), Blocking Antibody (Inhibition)

Product Details

Brand:	BD Pharmingen™
Immunogen:	Recombinant human GM-CSF
Clone:	BVD2-21C11
Isotype:	IgG2a
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. 4. Ficoll-Paque is a trademark of Amersham Biosciences Limited. 5. Cy is a trademark of Amersham Biosciences Limited.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

	chromatography.

Target Details

Target:	GM-CSF (CSF2)
Alternative Name:	GM-CSF (CSF2 Products)
Background:	The BVD2-21C11 monoclonal antibody specifically binds to human Granulocyte/Macrophage - Colony Stimulating Factor (GM-CSF). Human GM-CSF is encoded by the CSF2 gene and is also known as Colony Stimulating Factor 2. GM-CSF is produced by activated T lymphocytes, macrophages, endothelial cells, fibroblasts, stromal cells and other cell types including B lymphocytes, mast cells, eosinophils, and osteoblasts. GM-CSF stimulates the survival, proliferation and/or differentiation of various cell types including neutrophils, eosinophils, macrophages, dendritic cells, megakaryocytes, erythroid cells, endothelial cells and their precursors. The immunogen used to generate the BVD2-21C11 hybridoma was recombinant human GM-CSF. The BVD2-21C11 antibody has been reported to crossreact with GM-CSF from the rhesus monkey. BVD2-21C11 is a neutralizing antibody. Synonyms: CSF2, Colony stimulating factor 2 (granulocyte-macrophage), CSF, GMCSF
Pathways:	JAK-STAT Signaling, Cellular Response to Molecule of Bacterial Origin

Application Details

Application Notes:	Blocking Control for Intracellular Staining: The purified BVD2-21C11 antibody (ABIN967465) can be used as a blocking control to demonstrate specificity of human GM-CSF staining by the PE-BVD2-21C11. To perform this control, the fixed/permeabilized cells (~ 1 million) can be incubated with 1 - 10 µg of unlabeled BVD2-21C11 antibody (ABIN967465) for 20 minutes at 4°C, prior to staining with PE-BVD2-21C11 antibody (eg, 0.1 - 0.5 µg mAb/ 1 million cells). The intracellular cytokine staining technique and use of blocking controls are described in detail by C. Prussin and D. Metcalfe. ELISA Detection: The biotinylated BVD2-21C11 antibody, is useful as a detection antibody for a sandwich ELISA for measuring human GM-CSF protein levels. Biotinylated BVD2-21C11 antibody can be paired with the purified BVD2-23B6 antibody as the capture antibody, with recombinant human GM-CSF as the standard. This ELISA pair is recommended primarily for measuring cytokine from experimental cell culture systems.

Application Details

Restrictions:	For Research Use only

Handling

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

Abrams: "Immunoenzymetric assay of mouse and human cytokines using NIP-labeled anti-cytokine antibodies." in: **Current protocols in immunology / edited by John E. Coligan ... [et al.]** , Vol. Chapter 6, pp. Unit 6.20, (2008) (PubMed).

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).

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).

Kita, Ohnishi, Okubo, Weiler, Abrams, Gleich: "Granulocyte/macrophage colony-stimulating factor and interleukin 3 release from human peripheral blood eosinophils and neutrophils." in: **The Journal of experimental medicine**, Vol. 174, Issue 3, pp. 745-8, (1991) (PubMed).

Bacchetta, de Waal Malefijt, Yssel, Abrams, de Vries, Spits, Roncarolo: "Host-reactive CD4+ and CD8+ T cell clones isolated from a human chimera produce IL-5, IL-2, IFN-gamma and granulocyte/macrophage-colony-stimulating factor but not IL-4." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 144, Issue 3, pp. 902-8, (1990) (PubMed).

Images

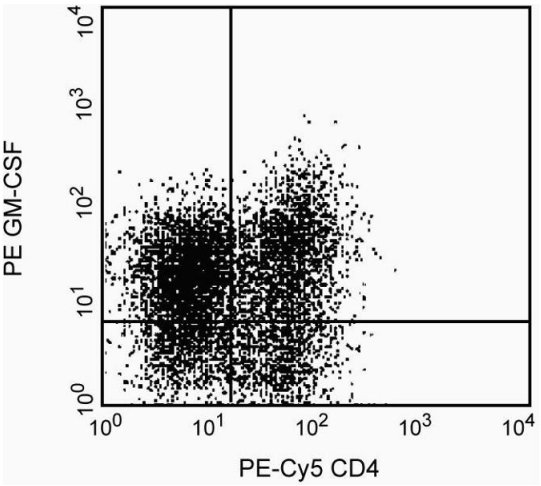
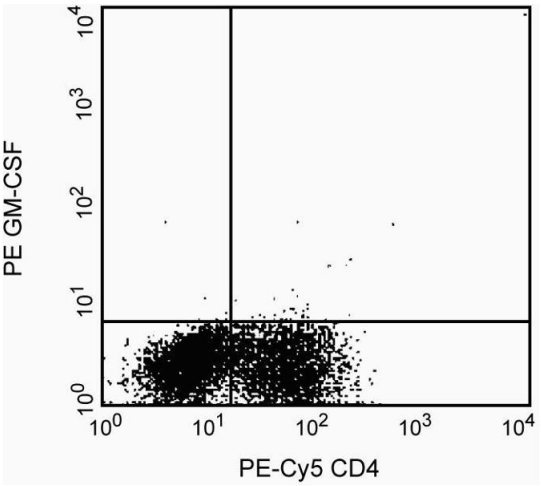
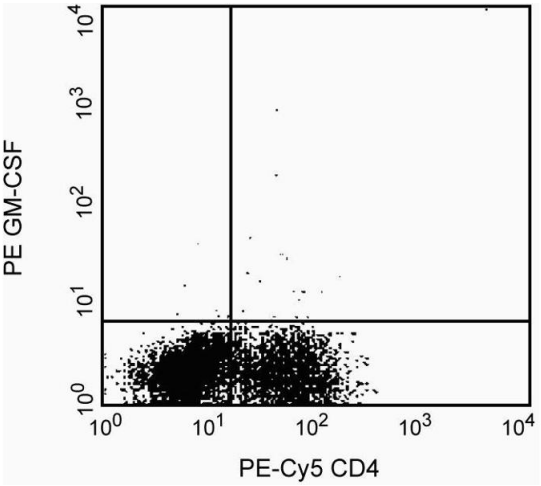


Image 1. Expression of GM-CSF by stimulated human peripheral blood mononuclear cells (PBMC). Ficoll™-separated human PBMC were stimulated with soluble anti-human CD3 antibody (1 µg/ml final concentration, UCHT1), recombinant human IL-2 (10 ng/ml final concentration) and recombinant human IL-4 (10 ng/ml final concentration) 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 hours with PMA (50 ng/ml final concentration, Sigma) and calcium ionophore A23187 (250 ng/ml final concentration, Sigma) in the presence of BD GolgiStop™ (2 µM final concentration). The cells were harvested, stained with PE-Cy™5 anti CD4, fixed, permeabilized, and subsequently stained with 0.25 µg of PE Rat anti-Human GM-CSF antibody (PE-BVD2-21C11, ABIN967465) by using the staining protocol (first panel). To demonstrate specificity of staining, the binding of the PE-BVD2-21C11 antibody was blocked by preincubation of the antibody conjugate with recombinant human GM-CSF (0.1 µg, Center panel) and by preincubation of the fixed/permeabilized cells with unlabeled BVD2-21C11 antibody (5 µg, ABIN967465, second panel) prior to staining. The quadrant markers for the bivariate dot plot were set based on the autofluorescence control and verified using the ligand-blocking and unlabeled antibody blocking controls.



Flow Cytometry

Image 2. Preincubation of the fixed/permeabilized cells with unlabeled BVD2-21C11 antibody



Flow Cytometry

Image 3. Preincubation of the antibody conjugate with recombinant human GM-CSF