Technical Data Sheet

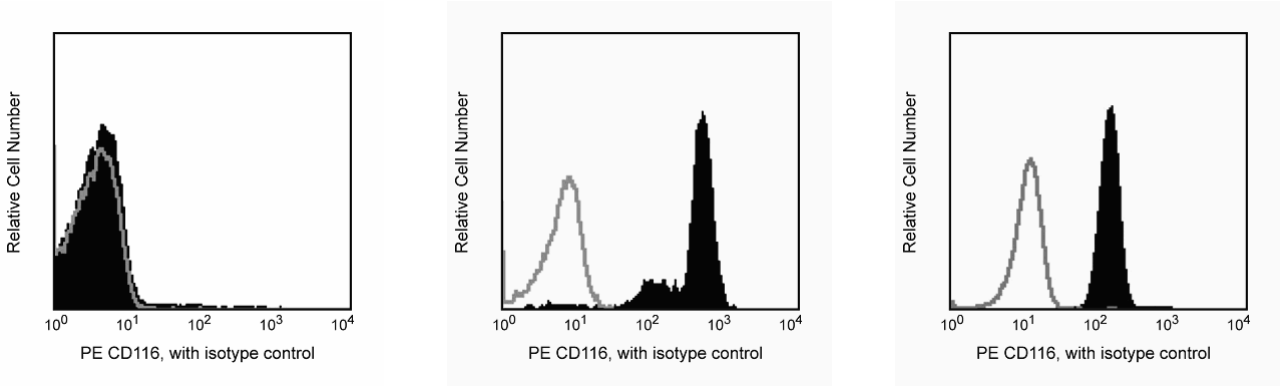
PE Mouse Anti-Human CD116

Product Information

Material Number:	**551373**
Alternate Name:	GM-CSF Receptor α chain
Size:	0.2 mg
Concentration:	0.2 mg/ml
Clone:	hGMCSFR-M1
Immunogen:	Recombinant human GM-CSFR
Isotype:	Mouse IgG1, κ
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The hGMCSFR-M1 antibody reacts with the subunit (GM-CSFR) of the human Granulocyte-Macrophage Colony-Stimulating Factor Receptor complex. This 75-85 kD subunit is also known as CD116. The hGMCSFR-M1 antibody was first clustered at the Fifth International Workshop on Human Leucocyte Differentiation Antigens. The GM-CSFR subunit associates with the 120-140 kD ßc subunit (common subunit, CD131), that is shared with the receptors for interleukins IL-3 and IL-5. Both of the chains of the GM-CSFR complex are involved in ligand binding and intracellular signaling. The α chain appears to transmit most of the biological signals. GM-CSFR's are expressed by a variety of myeloid cell lines, hematopoietic and non-hematopoetic tumor cells, and normal cell types including monocytes, macrophages, neutrophils, eosinophils, myeloid dendritic cells, endothelial cells, fibroblasts, and placental trophoblasts. Lymphocytes are negative for GM-CSFR expression. Reports suggest that GM-CSFR plays a role in myeloid lineage growth and differentiation. The immunogen used to generate the hGMCSFR-M1 hybridoma was recombinant human GM-CSFR.



Overlapping Histograms: Expression of cell surface GM-CSFRα by human peripheral blood leucocytes. *Whole human blood was first treated with Pharm Lyse™(Cat No. 555899) to lyse erythrocytes prior to staining with hGMCSFR-M1. The peripheral blood leucocytes were subsequently blocked with normal polyclonal human IgG (5 µg/106 cells) and stained with R-PE-conjugated hGMCSFR-M1 (0.5 µg/10^6 cells, Cat No. 551373). Staining with the R-PE-conjugated hGMCSFR-M1 antibody (filled histograms) is compared to staining obtained using the mouse IgG1 isotype control (open histograms). The histograms in the figure were derived from gated events with the light scattering characteristics of viable lymphocytes (left panel), monocytes (center panel) and granulocytes (right panel). Note: Certain human cell lines or cell types (e.g., neutrophils, 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 R-PE under optimum conditions, and unconjugated antibody and free PE were removed.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
555899	Lysing Buffer	100 ml	(none)
554680	PE Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-21

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Product Notices

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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

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Jokhi PP, King A, Jubinsky PT, Loke YW. Demonstration of the low affinity alpha subunit of the granulocyte-macrophage colony-stimulating factor receptor (GM-CSF-R alpha) on human trophoblast and uterine cells. *J Reprod Immunol.* 1994; 26(2):147-164.(Biology)

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Ronco LV, Silverman SL, Wong SG, Slamon DJ, Park LS, Gasson JC. Identification of conserved amino acids in the human granulocyte-macrophage colony-stimulating factor receptor alpha subunit critical for function. Evidence for formation of a heterodimeric receptor complex prior to ligand binding. *J Biol Chem.* 1994; 269(1):277-283.(Biology)

Stacchini A, Fubini L, Aglietta M. Flow cytometric detection and quantitative analysis of the GM-CSF receptor in human granulocytes and comparison with the radioligand binding assay. *Cytometry.* 1996; 24(4):374-381.(Clone-specific)

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