Technical Data Sheet

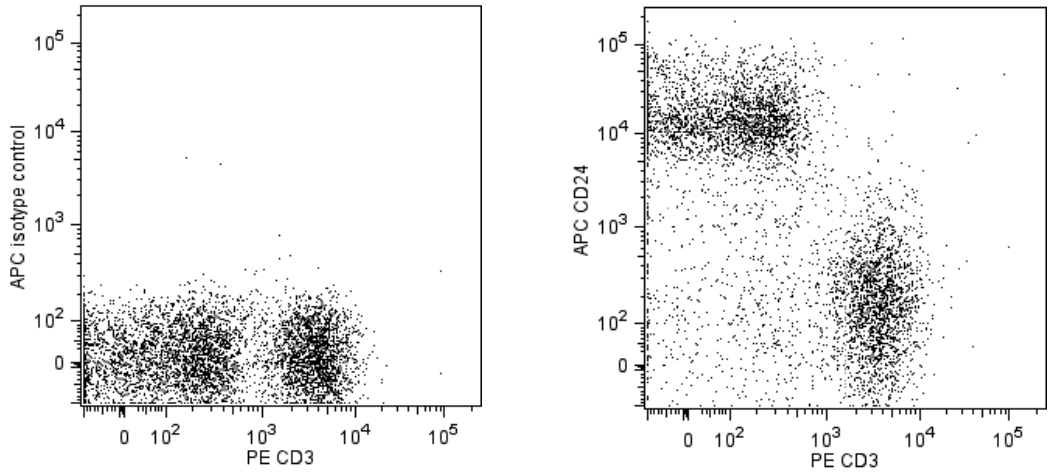
APC Rat Anti-Mouse CD24

Product Information

Material Number:	**562349**
Alternate Name:	CD24a; HSA; Heat Stable Antigen; Ly-52; Nectadrin; R13-Ag
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	M1/69
Immunogen:	C57BL/10 Mouse Splenic T Lymphocytes
Isotype:	Rat (DA) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The M1/69 monoclonal antibody specifically binds to CD24 (Heat-Stable Antigen, HSA or HsAg), a variably glycosylated, glycosyl-phosphatidylinositol-anchored membrane protein expressed on erythrocytes, granulocytes, monocytes, lymphocytes, and neurons. Hematopoietic stem cells of the embryonic yolk sac and fetal liver express CD24. Levels of expression of CD24 vary during differentiation of the T and B cell lineages. In the bone marrow, hematopoietic progenitors acquire CD24 expression upon commitment to the B-lymphocyte lineage. Immature B cells in the bone marrow express low CD24 levels whereas peripheral B lymphocytes express intermediate to high levels of CD24. The level of CD24 expression has been reported to rise upon activation of splenic B cells with LPS, but not with CD154 (CD40 Ligand). The majority of thymocytes express high levels of CD24, while most mature thymic and peripheral T lymphocytes do not express CD24. In contrast, TCR-bearing thymocytes which emigrate to the spleen are CD24+. Dendritic cells of the thymus, spleen, liver, and epidermal Langerhans cells have also been reported to express CD24. CD24 is not expressed by NK cells, as determined by staining with J11d mAb (Cat. No. 553146). CD24 is involved in the costimulation of CD4+ T cells by B cells, it is a "co-inducer" of in vitro thymocyte maturation, and it is a ligand of CD62P (P-selectin). While the monoclonal antibodies 30-F1, M1/69, and J11d all react with CD24, they show subtle differences in the level of staining of different lymphocyte populations. When possible, investigators should continue to use the same monoclonal anti-CD24 antibody as used in previous studies.



Multicolor flow cytometric analysis of CD24 expression on mouse splenocytes. *Splenocytes from C57BL/6 mice were stained with PE Hamster Anti-Mouse CD3e antibody (Cat. No. 553063/553064/561824) and with either APC Rat IgG2b, κ isotype control (Cat. No. 553991, Left Panel) or APC Rat Anti-Mouse CD24 antibody (Cat. No. 562349, Right Panel). Two-color flow cytometric dot plots showing the correlated expression patterns of CD3 versus CD24 (or Ig Isotype Control staining) were derived from gated events with the forward and side light-scatter characteristics of viable splenocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.*

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 to APC under optimum conditions, and unconjugated antibody and free APC were removed.

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Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
553991	APC Rat IgG2b, κ Isotype Control	0.1 mg	A95-1
553063	PE Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
553064	PE Hamster Anti-Mouse CD3e	0.2 mg	145-2C11
561824	PE Hamster Anti-Mouse CD3e	25 µg	145-2C11
553146	Purified Rat Anti-Mouse CD24	0.5 mg	J11d

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
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. This APC-conjugated reagent can be used in any flow cytometer equipped with a dye, HeNe, or red diode laser.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Alterman LA, Crispe IN, Kinnon C. Characterization of the murine heat-stable antigen: an hematolymphoid differentiation antigen defined by the J11d, M1/69 and B2A2 antibodies. *Eur J Immunol.* 1990; 20(7):1597-1602. (Clone-specific)

Crowley M, Inaba K, Witmer-Pack M, Steinman RM. The cell surface of mouse dendritic cells: FACS analyses of dendritic cells from different tissues including thymus. *Cell Immunol.* 1989; 118(1):108-125. (Clone-specific)

Reichlin A, Iizuka K, Yokoyama WM. Isolation of murine natural killer cells. In: Coligan J, Kruisbeek AM, Margulies D, Shevach EM, Strober W, ed. *Current Protocols in Immunology*. New York: John Wiley and Sons; 1999:3.22.1-3.22.6. (Biology)

Springer T, Galfre G, Secher DS, Milstein C. Monoclonal xenogeneic antibodies to murine cell surface antigens: identification of novel leukocyte differentiation antigens. *Eur J Immunol.* 1978; 8(8):539-551. (Immunogen)

Stall AM, Wells SM. FACS analysis of murine B-cell populations. In: Herzenberg LA, Weir DM, Blackwell C, ed. *Weir's Handbook of Experimental Immunology.* Blackwell Science Publishers; 1997:63.1-63.17. (Biology)

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