Technical Data Sheet

PE Rat Anti-Mouse CD24

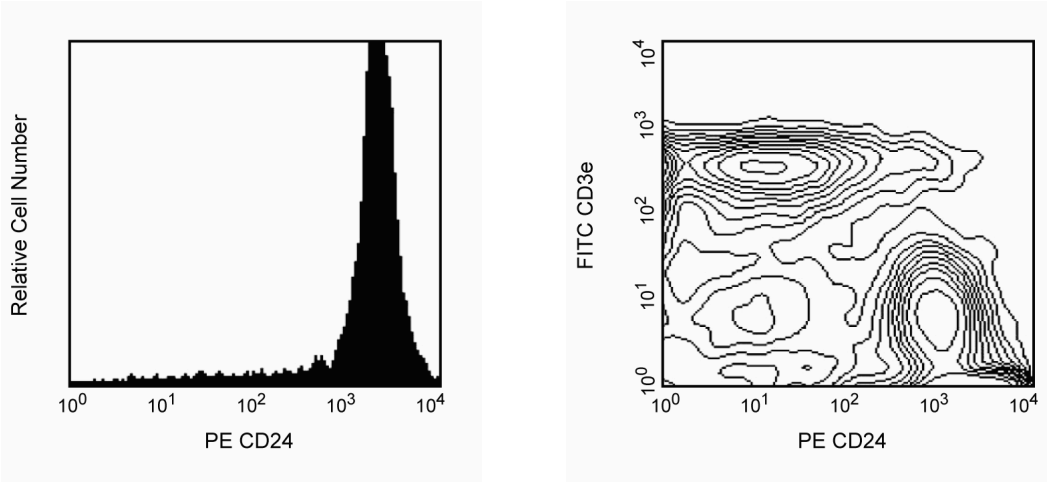
Product Information

Material Number:	**561079**
Alternate Name:	CD24a; HSA; Heat Stable Antigen; Ly-52; Nectadrin; R13-Ag
Size:	25 µg
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 ≤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.

This antibody is routinely tested by flow cytometric analysis (≤ 1 µg/million cells). Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Differential expression of CD24 on thymocytes and peripheral T lymphocytes. *BALB/c thymocytes were stained with PE-conjugated mAb M1/69 (left panel). BALB/c splenocytes were simultaneously stained with PE-conjugated mAb M1/69 and FITC-conjugated anti-mouse CD3e mAb 145-2C11 (Cat. No. 553061/553062, right panel). Flow cytometry was performed on a BD FACScan™ flow cytometry system.*

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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

Recommended Assay Procedure:

This antibody conjugate is compatible with intracellular staining protocols using the BD Cytofix/Cytoperm™ intracellular staining buffer (Cat. No. 554714).

Suggested Companion Products

Catalog Number	Name	Size	Clone
553989	PE Rat IgG2b, κ Isotype Control	0.1 mg	A95-1

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.

References

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)