Technical Data Sheet

Purified Rat Anti-Mouse CD24

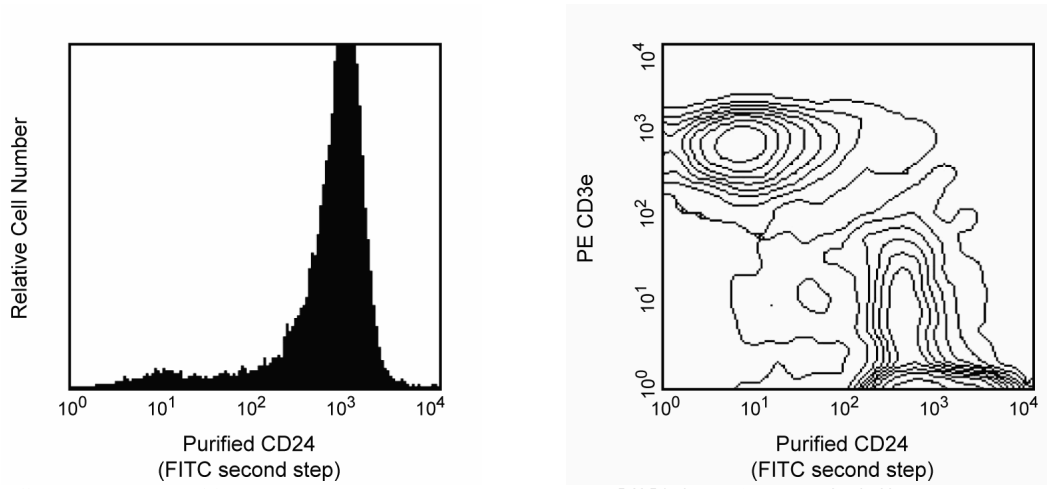
Product Information

Material Number:	**557436**
Alternate Name:	Heat Stable Antigen
Size:	0.1 mg
Concentration:	0.5 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 antibody reacts with CD24 (Heat-Stable Antigen, HSA or HsAg), a variably glycosylated GPI-anchored membrane protein found on erythrocytes, granulocytes, monocytes, lymphocytes, and neurons. Hematopoietic stem cells of the embryonic yolk sac and fetal liver express CD24.5 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 and spleen of adult mice peripheral B lymphocytes express intermediate 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 antibody as used in previous studies.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Diffrerential expression of CD24 on thymocytes and peripheral T lymphocytes. *BALB/c thymocytes were stained with purified mAb M1/69 followed by FITC-conjugated anti-rat Ig κ light chain mAb MRK-1 (Cat. No. 553872, left panel). BALB/c splenocytes were simultaneously stained with purified mAb M1/69 and PE-conjugated anti-mouse CD3e mAb 145-2C11 (Cat. No. 553063/553064) followed by mAb MRK-1 (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.
Store undiluted at 4° C.

Application Notes

Application

Flow cytometry	Routinely Tested
Cytotoxicity	Reported
Immunohistochemistry-zinc-fixed	Reported
Immunohistochemistry-formalin (antigen retrieval required)	Reported
Immunohistochemistry-frozen	Reported
Western blot	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
553146	Purified Rat Anti-Mouse CD24	0.5 mg	J11d
553872	FITC Mouse Anti-Rat Ig κ	0.5 mg	MRK-1
553063	PE Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
553986	Purified Rat IgG2b, κ Isotype Control	0.5 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. 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. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE™ (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.

References

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