Technical Data Sheet

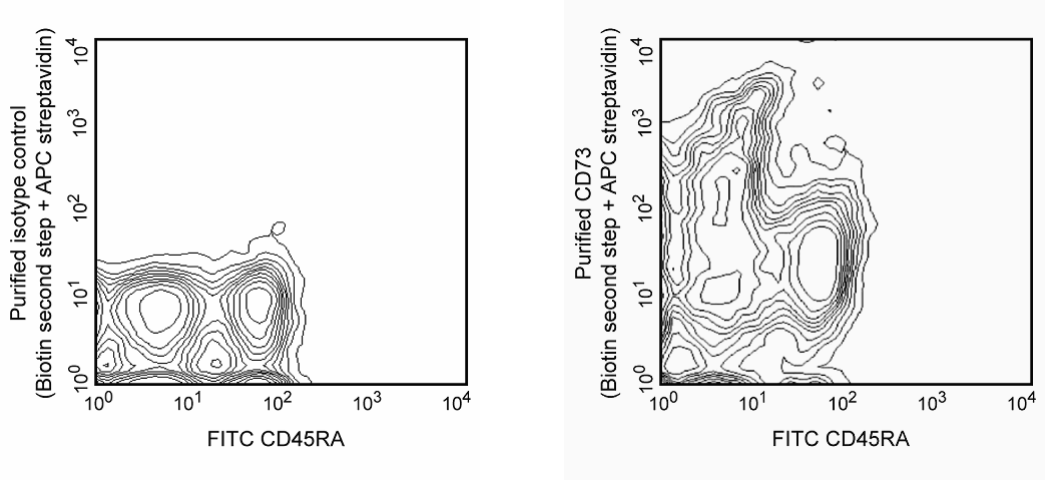
Purified Mouse Anti-Rat CD73

Product Information

Material Number:	**551123**
Alternate Name:	Ecto-5'-nucleotidase
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	5F/B9
Immunogen:	Ecto-5'-nucleotidase purified from rat renal membranes
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 5F/B9 antibody reacts with CD73 or Ecto-5'-nucleotidase (5'-NT), a 68-kDa GPI-anchored cell-surface protein with enzymatic and signal transduction activities. 5'-NT catalyzes the dephosphorylation of extracellular nucleoside 5' monophosphates into a form which can enter cells to meet their metabolic needs. It also regulates the concentration of extracellular adenosine, which initiates a variety of physiological responses through the adenosine receptors in many tissues. Membrane-bound and/or intracytoplasmic CD73 is found in a variety of organs and tissues, including liver, kidney, adrenal cortex, spleen, muscle, nervous tissue, and heart. The expression of CD73 on mouse leukocytes has been well characterized. In the rat, CD73 has been detected on subsets of peripheral B and T lymphocytes, NK cells, and granulocytes, as well as bone marrow myeloid cells and some CD4+CD8- thymocytes. The 5F/B9 mAb does not inhibit the enzymatic activity of 5'-NT. Although soluble or plate-bound 5F/B9 mAb by itself does not affect T lymphocyte proliferation, it is an effective co-stimulator with plate-bound anti-rat CD3 mAb G4.18 (Cat. no. 554829).



Two-color analysis of the expression of CD73 on rat spleen leukocytes. *LEW splenocytes were stained with FITC-conjugated anti-rat CD45RA mAb OX-33 (Cat. no. 554883) and either purified mouse IgG1, κ isotype control mAb MOPC-31C Cat. no. 557273, Left panel) or purified mAb 5F/B9 (Right panel), followed by biotinylated anti-mouse IgG1 mAb A85-1 (Cat. no. 553441), then Streptavidin-APC (Cat. no. 554067). Flow cytometry was performed on a BD FACSCalibur™ flow cytometry system.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at 4°C.

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Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
Immunofluorescence	Tested During Development
Immunohistochemistry-zinc-fixed	Tested During Development
Immunoprecipitation	Reported
(Co)-stimulation	Reported
Immunohistochemistry-formalin (antigen retrieval required)	Not Recommended

Suggested Companion Products

Catalog Number	Name	Size	Clone
554829	Purified NA/LE Mouse Anti-Rat CD3	0.5 mg	G4.18
554883	FITC Mouse Anti-Rat CD45RA	0.5 mg	OX-33
557273	Purified Mouse IgG1, κ Isotype Control	0.5 mg	MOPC-31C
553441	Biotin Rat Anti-Mouse IgG1	0.5 mg	A85-1
554067	APC Streptavidin	0.1 mg	(none)

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. 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.
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

Carvalho GS, Luzio JP, Siddle K, Coombs RR. Detection of ecto-5'-nucleotidase on rat B and T lymphocyte subpopulations using a monoclonal antibody in rosetting reactions. *J Immunol Methods.* 1987; 102(1):119-126.(Biology)

Gandhi R, Le Hir M, Kaissling B. Immunolocalization of ecto-5'-nucleotidase in the kidney by a monoclonal antibody. *Histochem J.* 1990; 95(2):165-174. (Immunogen: Immunohistochemistry, Immunoprecipitation)

Mlodzik K, Loffing J, Le Hir M, Kaissling B. Ecto-5'-nucleotidase is expressed by pericytes and fibroblasts in the rat heart. *Histochem J.* 1995; 103(3):227-236. (Biology)

Yamashita Y, Hooker SW, Jiang H, et al. CD73 expression and fyn-dependent signaling on murine lymphocytes. *Eur J Immunol.* 1998; 28(10):2981-2990.(Biology)

Zenker W, Rinne B, Bankoul S, Le Hir M, Kaissling B. 5'-nucleotidase in spinal meningeal compartments in the rat. An immuno and enzyme histochemical study. *Histochem J.* 1992; 98(2):135-139.(Biology)

Zimmermann H. 5'-Nucleotidase: molecular structure and functional aspects. *Biochem J.* 1992; 285((Pt 2)):345-365.(Biology)