

Technical Data Sheet

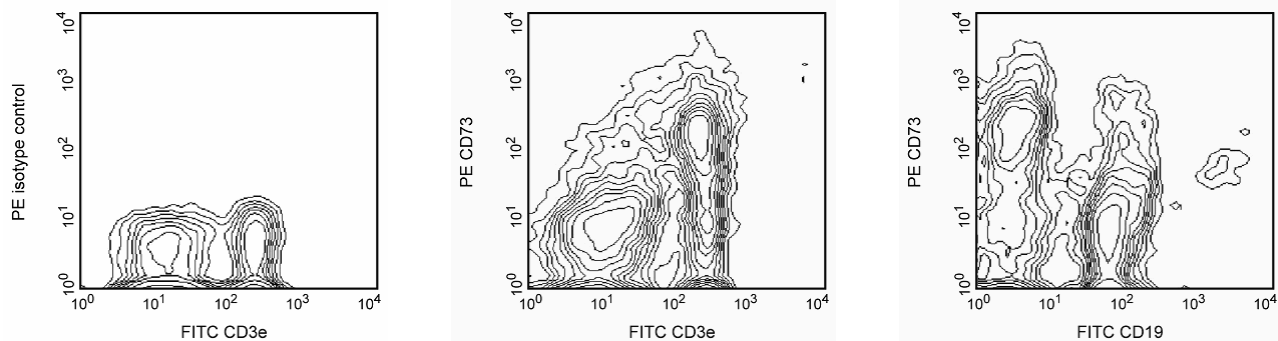
PE Rat Anti-Mouse CD73

Product Information

Material Number:	550741
Alternate Name:	Ecto-5'-nucleotidase
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	TY/23
Immunogen:	BALB/c mouse splenocytes and CHO cells transfected with the Mouse CD73 gene, Nt5
Isotype:	Rat (WI) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The TY/23 antibody reacts with CD73 or Ecto-5'-nucleotidase (5'-NT), a 69 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. CD73 expression appears to be developmentally regulated on leukocytes. In the bone marrow, it is found on most CD11b+ myeloid cells and very few CD19+ cells of the B-lymphocyte lineage. It is not found on CD11b+ cells in the periphery nor on marrow-derived GM-CSF-stimulated dendritic cells. Some peripheral B lymphocytes express CD73, with higher levels on isotype-switched B cells. The few thymocytes which have detectable surface CD73 are of the CD4-CD8- (double negative) and the single-positive populations. In the peripheral lymphoid organs, significant subpopulations of the CD4+ and CD8+ T lymphocytes express CD73, with variation in the percentages of CD73-bearing T cells observed among inbred mouse strains. In the thymus and peripheral lymphoid organs, CD73 is found on endothelia and stromal cells. CD73 has also been detected on bone marrow and thymic epithelial cell lines, kidney glomeruli and proximal-tubule epithelial cells, and liver endothelial cells and hepatocytes. The TY/23 mAb inhibits the enzymatic activity of CD73. Although soluble TY/23 mAb by itself does not affect T lymphocyte proliferation, it is an effective co-stimulator with PMA, but not with Concanavalin-A or plate-bound anti-CD3 ϵ mAb 145-2C11.



Two-color analysis of the expression of CD73 on splenic T and B lymphocytes. C57BL/6 splenocytes were stained with either PE-conjugated isotype control mAb R35-95 (Cat. No. 553930, left panel) or PE-conjugated mAb TY/23 (middle and right panels). T or B lymphocytes were identified by staining with FITC-conjugated anti-mouse CD3 ϵ mAb 145-2C11 (Cat. No. 553061/553062, left and middle panels) or FITC-conjugated anti-mouse CD19 mAb 1D3 (Cat. No. 557398/553785, right panel), respectively. 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.

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.

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Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
553930	PE Rat IgG2a, κ Isotype Control	0.1 mg	R35-95
553061	FITC Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
557398	FITC Rat Anti-Mouse CD19	0.1 mg	1D3

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/pharmingen/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

Resta R, Yamashita Y, Thompson LF. Ecto-enzyme and signaling functions of lymphocyte CD73. *Immunol Rev.* 1998; 161:95-109.(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.
(Immunogen)