

Technical Data Sheet

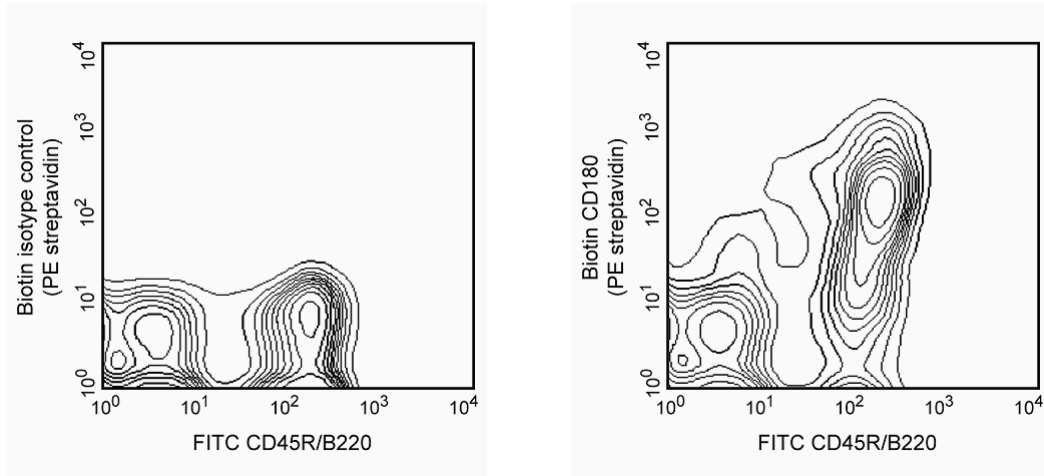
Biotin Rat Anti-Mouse CD180

Product Information

Material Number:	552129
Alternate Name:	RP105
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	RP/14
Immunogen:	BALB/c mouse splenocytes
Isotype:	Rat (WI) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The RP/14 antibody reacts with CD180, the "radioprotective" 105 kDa (RP105) antigen expressed on mature B lymphocytes. Like other members of the Toll-like Receptor (TLR) family, the extracellular region of CD180 contains tandem repeats of a leucine-rich motif flanked by regions containing conserved cysteines. These characteristic structural components of TLR may mediate protein-protein interactions and regulation of signal transduction involved in innate immune responses. Furthermore, CD180 associates with the secretory protein MD-1 on the cell surface. Cross-linking of cell-surface CD180 with the RP/14 antibody induces activation signals in B lymphocytes. Despite the expression of CD180 on lymphocytes of all strains tested (BALB/c, BALB/c.xid, C3H, C57BL/6, CBA/N, and 129/Sv), some strains (BALB/c.xid, C57BL/6.xid, CBA/N, 129/Sv, and 129/Ola) display deficient responses to that stimulatory effects of mAb RP/14.



Two-color analysis of CD180 expression on splenic B lymphocytes. BALB/c splenocytes were stained with either biotinylated rat IgG2a, κ isotype control mAb R35-95 (Cat. No. 553928, left panel) or biotinylated mAb RP/14 (right panel) in the presence of Mouse Fc Block™ (purified anti-mouse CD16/CD32 mAb 2.4G2, Cat. No. 553141/553142), followed by Streptavidin-PE (Cat. No. 554061) and FITC-conjugated anti-mouse CD45R/B220 mAb RA3-6B2 (Cat. No. 553087/553088). Flow cytometry was performed on a FACSCalibur™ (BD Biosciences, San Jose, CA).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry

Routinely Tested

BD Biosciences

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Suggested Companion Products

Catalog Number	Name	Size	Clone
553928	Biotin Rat IgG2a κ Isotype Control	0.25 mg	R35-95
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
554061	PE Streptavidin	0.5 mg	(none)
553087	FITC Rat Anti-Mouse CD45R/B220	0.1 mg	RA3-6B2

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/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.

References

- Chan VW, Mecklenbrauker I, Su I, et al. The molecular mechanism of B cell activation by toll-like receptor protein RP-105. *J Exp Med.* 1998; 188(1):93-101. (Biology)
- Corcoran LM, Metcalf D. IL-5 and Rp105 signaling defects in B cells from commonly used 129 mouse substrains. *J Immunol.* 1999; 163(11):5836-5842. (Biology)
- Miyake K, Shimazu R, Kondo J, et al. Mouse MD-1, a molecule that is physically associated with RP105 and positively regulates its expression.. *J Immunol.* 1998; 161(3):1348-1353. (Biology)
- Miyake K, Yamashita Y, Hitoshi Y, Takatsu K, Kimoto M. Murine B cell proliferation and protection from apoptosis with an antibody against a 105-kD molecule: unresponsiveness of X-linked immunodeficient B cells. *J Exp Med.* 1994; 180(4):1217-1224. (Immunogen)
- Miyake K, Yamashita Y, Ogata M, Sudo T, Kimoto M. RP105, a novel B cell surface molecule implicated in B cell activation, is a member of the leucine-rich repeat protein family. *J Immunol.* 1995; 154(7):3333-3340. (Biology)
- Ogata H, Su I, Miyake K, et al. The toll-like receptor protein RP105 regulates lipopolysaccharide signaling in B cells. *J Exp Med.* 2000; 192(1):23-29. (Biology)
- Yamashita Y, Miyake K, Miura Y, et al. Activation mediated by RP105 but not CD40 makes normal B cells susceptible to anti-IgM-induced apoptosis: a role for Fc receptor coligation. *J Exp Med.* 1996; 184(1):113-120. (Biology)