Technical Data Sheet

FITC Mouse Anti-Rat CD3

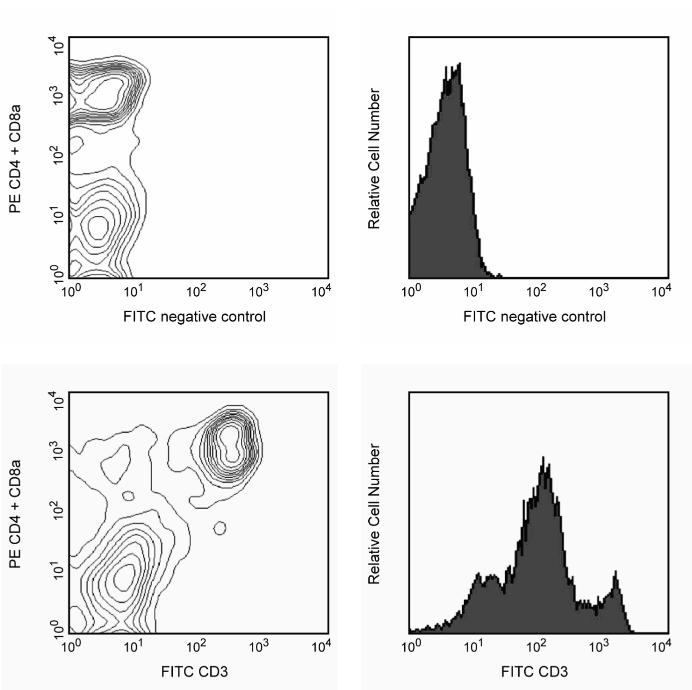
Product Information

Material Number:	**559975**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	G4.18
Immunogen:	PHA-stimulated rat lymph node and spleen cells
Isotype:	Mouse (BALB/c) IgG3, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The G4.18 antibody reacts with the T-cell receptor-associated CD3 cell-surface antigen found on thymocytes, peripheral T lymphocytes, and dendritic epidermal T cells. It has been reported that CD3 expression is down-regulated within 24 hours in concanavalin A-stimulated rat T cells, and soluble mAb inhibits the allogeneic mixed-lymphocyte proliferative response and cell-mediated cytotoxicity to allogeneic target cells. In vivo treatment with G4.18 mAb prevents cardiac and skin allograft rejection, resulting in donor-specific tolerance. Pre-incubation of splenocytes with the alternate anti-rat CD3 monoclonal antibody, 1F4 (Cat. No. 556970), blocks staining with mAb G4.18.

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



CD3e expression in rat spleen and thymus. *LEW splenocytes were simultaneously stained with PE-conjugated OX-35 (anti-rat CD4, Cat. No. 554838, left panels), PE-conjugated OX-8 (anti-rat CD8a, Cat. No. 559976/554857, left panels) and FITC-conjugated G4.18 (bottom left panel) monoclonal antibodies. Please note that CD3-CD4+ monocytes and CD3- CD8a+ NK cells may be found in the rat spleen. LEW thymocytes were stained with FITC-conjugated G4.18 mAb (bottom right panel) or unstained (top right panel). Flow cytometry was performed on a BD FACScan™ 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 FITC under optimum conditions, and unreacted FITC was removed.
Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554838	PE Mouse Anti-Rat CD4	0.2 mg	OX-35
559976	PE Mouse Anti-Rat CD8a	0.1 mg	OX-8
559806	FITC Mouse IgG3, κ Isotype Control	0.25 mg	A112-3

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.

References

Morris DL, Komocsar WJ. Immunophenotyping analysis of peripheral blood, splenic, and thymic lymphocytes in male and female rats. *J Pharmacol Toxicol Methods.* 1997; 37(1):37-46. (Clone-specific)

Nelson DJ, McMenamin C, McWilliam AS, Brenan M, Holt PG. Development of the airway intraepithelial dendritic cell network in the rat from class II major histocompatibility (Ia)-negative precursors: differential regulation of Ia expression at different levels of the respiratory tract. *J Exp Med.* 1994; 179(1):203-212. (Clone-specific: Immunohistochemistry)

Nicolls MR, Aversa GG, Pearce NW, et al. Induction of long-term specific tolerance to allografts in rats by therapy with an anti-CD3-like monoclonal antibody. *Transplantation.* 1993; 55(3):459-468. (Immunogen: (Co)-stimulation, Flow cytometry, Immunohistochemistry, Immunoprecipitation, Inhibition, Stimulation)

Strickland D, Kees UR, Holt PG. Regulation of T-cell activation in the lung: alveolar macrophages induce reversible T-cell anergy in vitro associated with inhibition of interleukin-2 receptor signal transduction. *Immunology.* 1996; 87(2):250-258. (Biology)

Upham JW, Strickland DH, Bilyk N, Robinson BW, Holt PG. Alveolar macrophages from humans and rodents selectively inhibit T-cell proliferation but permit T-cell activation and cytokine secretion. *Immunology.* 1995; 84(1):142-147. (Biology)