

Technical Data Sheet

PE Mouse Anti-Rat CD28

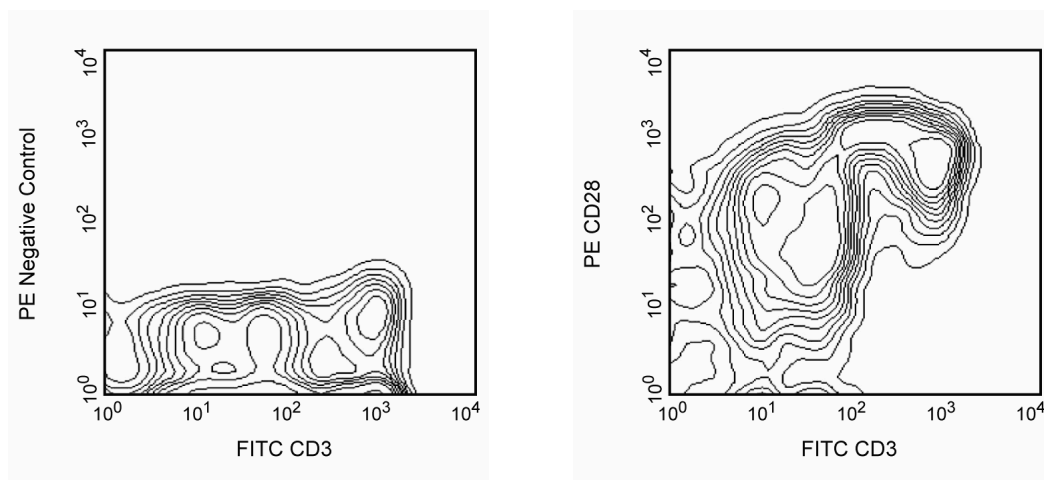
Product Information

Material Number:	559984
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	JJ319
Immunogen:	Rat CD28-transfected cell line
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The JJ319 antibody reacts with CD28, which is expressed on virtually all T lymphocytes bearing $\alpha\beta$ T-cell receptors (TCR), on most $\gamma\delta$ TCR-bearing T cells, and on a subset of NK cells. In the thymus, CD28 expression is developmentally regulated during the maturation of $\alpha\beta$ TCR-bearing T cells. CD28 is a costimulatory receptor required for activation of T cells; its ligands include CD80 (B7-1) and CD86 (B7-2). Soluble JJ319 mAb costimulates the proliferative responses and IL-2 production of CD4+ and CD8+ T cells activated by anti- $\alpha\beta$ -TCR mAb R73 (Cat. no. 554910). The alternate anti-rat CD28 mAb JJ316 (Cat. No. 554992) is capable of directly stimulating T cells in vitro and in vivo.

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.



Two-color analysis of the expression of CD28 in rat thymus. LOU thymocytes were simultaneously stained with FITC-conjugated anti-rat CD3 mAb G4.18 (Cat. No. 559975/554832) and PE-conjugated mAb JJ319 (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 R-PE under optimum conditions, and unconjugated antibody and free PE were removed by gel filtration chromatography.

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

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
559975	FITC Mouse Anti-Rat CD3	0.1 mg	G4.18
554832	FITC Mouse Anti-Rat CD3	0.5 mg	G4.18
550617	PE Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-31C

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmlingen/protocols for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/pharmlingen/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

Bluestone JA. New perspectives of CD28-B7-mediated T cell costimulation. *Immunity*. 1995; 2(6):555-559.(Biology)

Mitnacht R, Tacke M, Hunig T. Expression of cell interaction molecules by immature rat thymocytes during passage through the CD4+8+ compartment: developmental regulation and induction by T cell receptor engagement of CD2, CD5, CD28, CD11a, CD44 and CD53. *Eur J Immunol*. 1995; 25(2):328-332. (Biology)

Tacke M, Clark GJ, Dallman MJ, Hunig T. Cellular distribution and costimulatory function of rat CD28. Regulated expression during thymocyte maturation and induction of cyclosporin A sensitivity of costimulated T cell responses by phorbol ester. *J Immunol*. 1995; 154(10):5121-5127.(Immunogen)

Tacke M, Hanke G, Hanke T, Hunig T. CD28-mediated induction of proliferation in resting T cells in vitro and in vivo without engagement of the T cell receptor: evidence for functionally distinct forms of CD28. *Eur J Immunol*. 1997; 27(1):239-247.(Clone-specific)

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