

Technical Data Sheet

Purified NA/LE Mouse Anti-Rat CD28

Product Information

Material Number:	554992
Size:	0.5 mg
Concentration:	1.0 mg/ml
Clone:	JJ316
Immunogen:	Rat Cd28-transfected BALB/c mouse A20J B lymphoma
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2 μ m sterile filtered. Endotoxin level is ≤ 0.01 EU/ μ g (≤ 0.001 ng/ μ g) of protein as determined by the LAL assay.

Description

The JJ316 antibody reacts with CD28 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 JJ316 enhances the proliferative responses and IL-2 production by T cells activated by anti- $\alpha\beta$ -TCR mAb R73 (Cat. no. 554910). Furthermore, at high concentrations, cross-linked JJ316 mAb stimulates resting CD4⁺ and CD8⁺T cells to proliferate, secrete IL-2, express activation markers, and gain CTL activity in the absence of signaling through the TCR. In vivo administration of mAb JJ316 results in blastogenic transformation of peripheral CD4⁺ cells and dramatic lymphocytosis. The alternate anti-rat CD28 mAb JJ319 (Cat. no. 554993) cannot directly activate T cells, although it has in vitro costimulatory activity.

Preparation and Storage

Store undiluted at 4°C.

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

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunoprecipitation	Reported
(Co)-stimulation	Reported
Stimulation	Reported

Suggested Companion Products

Catalog Number	Name	Size	Clone
554721	Purified NA/LE Mouse IgG1 κ Isotype Control	0.5 mg	107.3
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
554910	Purified NA/LE Mouse Anti-Rat $\alpha\beta$ T-Cell Receptor	0.5 mg	R73

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.

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: (Co)-stimulation, Stimulation)

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