

Technical Data Sheet

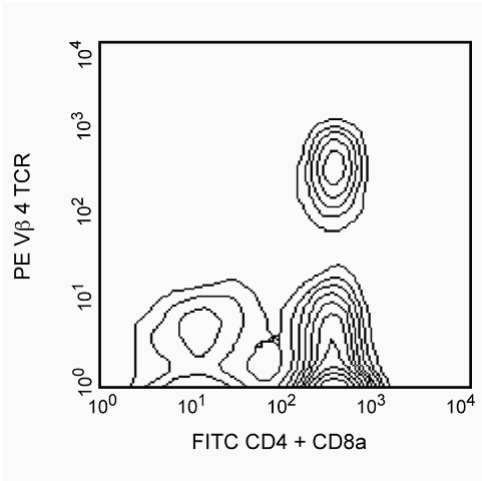
PE Rat Anti-Mouse Vβ4 T-Cell Receptor

Product Information

Material Number:	553366
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	KT4
Immunogen:	KT4 B10.D2 mouse T-cell clone I3
Isotype:	Rat (SD) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The KT4 antibody reacts with the Vβ4 T-cell Receptor (TCR) of mice having the a (*e.g.*, C57BR, C57L, SJL, SWR), b (*e.g.*, A, AKR, BALB/c, CBA, C3H/He, C57BL, C58, DBA/1, DBA/2), and c (*e.g.*, RIII) haplotypes of the *Tcrb* gene complex. Vβ4 TCR-bearing cells are among the CD4+ autoreactive T cells which induce autoimmune thyroiditis after elimination of regulatory (CD5-bright) T-cell subsets. Plate-bound KT4 antibody activates Vβ4 TCR-bearing T cells.



Two-color analysis of the expression of Vβ4 TCR on peripheral T lymphocytes. SJL lymph node cells were incubated simultaneously with PE-conjugated KT4, FITC-conjugated RM4-5 (anti-mouse CD4, Cat. no. 553046/553047), and FITC-conjugated 53-6.7 (anti-mouse CD8a, Cat. no. 553030/553031) monoclonal antibodies. Flow cytometry was performed on a FACScan™ (BDIS, 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 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.

Application Notes

Application

Flow cytometry	Routinely Tested
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Recommended Assay Procedure:

For flow cytometry of cell suspensions from peripheral lymphoid tissues, it is recommended that multicolor staining be performed to distinguish T lymphocytes from non-T cells.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
553046	FITC Rat Anti-Mouse CD4	0.1 mg	RM4-5
553030	FITC Rat Anti-Mouse CD8a	0.1 mg	53-6.7
553989	PE Rat IgG2b, κ Isotype Control	0.1 mg	A95-1

Product Notices

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

Katz JD, Benoist C, Mathis D. T helper cell subsets in insulin-dependent diabetes. *Science*. 1995; 268(5214):1185-1188.(Biology)

Sugihara S, Fujiwara H, Shearer GM. Autoimmune thyroiditis induced in mice depleted of particular T cell subsets. Characterization of thyroiditis-inducing T cell lines and clones derived from thyroid lesions. *J Immunol*. 1993; 150(2):683-694.(Biology)

Tomonari K, Lovering E, Spencer S. Correlation between the V beta 4+ CD8+ T-cell population and the H-2d haplotype. *Immunogenetics*. 1990; 31(5-6):333-339. (Immunogen)