

Technical Data Sheet

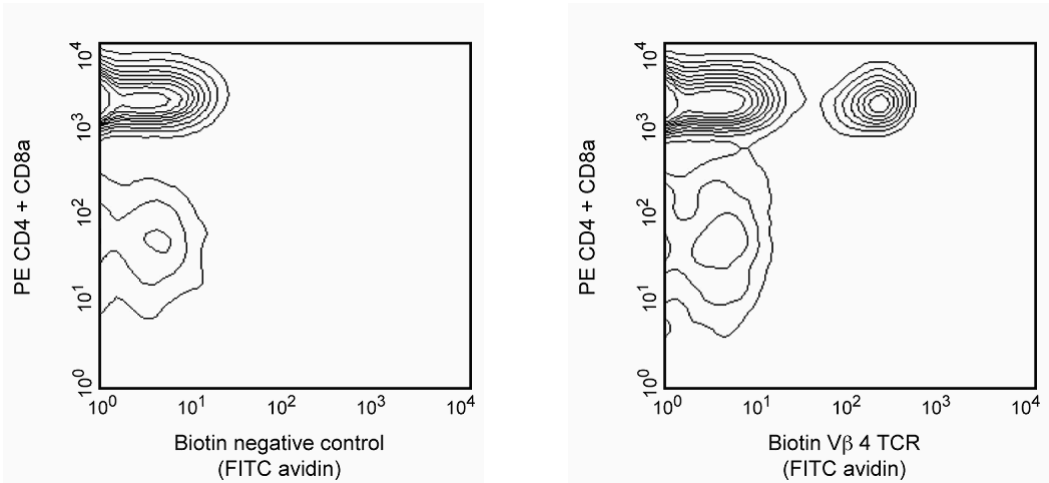
Biotin Rat Anti-Mouse Vβ4 T-Cell Receptor

Product Information

Material Number:	553364
Size:	0.25 mg
Concentration:	0.5 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 Vβ 4 TCR on peripheral T lymphocytes. SJL lymph node cells were incubated simultaneously with biotinylated KT4 (Panel B), PE-conjugated RM4-5 (anti-mouse CD4, Cat. no. 553048/553049, both panels), and PE-conjugated 53-6.7 (anti-mouse CD8a, Cat. no. 553032/553033, both panels) monoclonal antibodies, followed by Avidin-FITC (Cat. no. 554057, both panels). 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 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
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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
553032	PE Rat Anti-Mouse CD8a	0.1 mg	53-6.7
553048	PE Rat Anti-Mouse CD4	0.1 mg	RM4-5
554057	Avidin FITC	0.5 mg	(none)
553987	Biotin Rat IgG2b, κ Isotype Control	0.25 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/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

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)