Technical Data Sheet

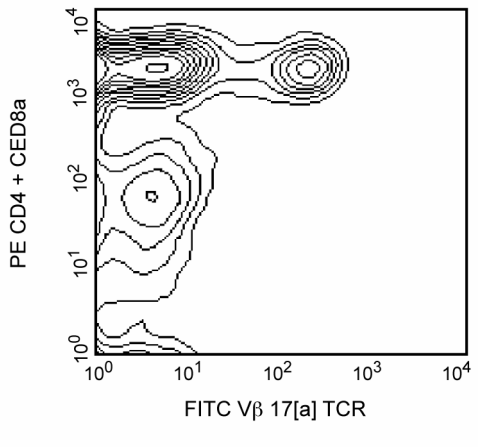
FITC Mouse Anti-Mouse Vβ 17[a] T-Cell Receptor

Product Information

Material Number:	**553212**
Size:	0.25 mg
Concentration:	0.5 mg/ml
Clone:	KJ23
Immunogen:	Mouse T cells
Isotype:	Mouse (BALB/c) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The KJ23 monoclonal antibody specifically recognizes Vβ 17[a] T-cell Receptor (TCR) of mice having the *a* haplotype (eg,C57L, SJL, SWR) of the *Tcrb* gene complex. Strains having the *b* (eg, A, AKR, BALB/c, CBA,C3H/He, C57BL, C58, DBA/1, DBA/2) *Tcrb* haplotype do not express functional Vβ 17 TCR, and the *Tcrb-V17* gene locus is deleted in mice having the *c* (eg, RIII) haplotype. Vβ 17[a] TCR-bearing Tlymphocytes are clonally eliminated in mice expressing I-E (eg, C57BR). KJ23 antibody also recognizes two phenotypic variants of the Vβ 17[a] TCR: Vβ 17[a2] expressed in a variety of wild-derivedmouse strains and Vβ 17[a(cz)] expressed in *Mtv*-free CZ mice. The effects of *Mtv*-encoded superantigens upon Vβ 17[a] TCR-bearing T cells has been reviewed. Plate-bound KJ23 antibody activates Vβ 17[a] TCR-bearing T cells, and injection of the antibody can deplete Vβ 17[a]-bearing Tcells.



Two-color analysis of the expression of Vß17a TCR on peripheral lymphocytes. *SJL/J lymph node cells were incubated simultaneously with FITC-conjugated mAb KJ23, PE-conjugated anti-mouse CD4 mAb RM4-5 (Cat. no. 553048/553049), and PE-conjugated anti-mouse CD8a mAb 53-6.7 (Cat. no. 553032/553033). 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

Recommended Assay Procedure:

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

Suggested Companion Products

Catalog Number	Name	Size	Clone
553032	PE Rat Anti-Mouse CD8a	0.1 mg	53-6.7

BD Biosciences

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553048	PE Rat Anti-Mouse CD4	0.1 mg	RM4-5
553456	FITC Mouse IgG2a, κ Isotype Control	0.25 mg	G155-178

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

Cazenave PA, Marche PN, Jouvin-Marche E, et al. V beta 17 gene polymorphism in wild-derived mouse strains: two amino acid substitutions in the V beta 17 region greatly alter T cell receptor specificity. *Cell.* 1990; 63(4):717-728. (Biology)

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Kappler JW, Wade T, White J, . A T cell receptor V beta segment that imparts reactivity to a class II major histocompatibility complex product. *Cell.* 1987; 49(2):263-271. (Immunogen)

Katz JD, Lebow LT, Bonavida B. The in vivo depletion of V beta 17a+ T cells results in the inhibition of reticulum cell sarcoma growth in SJL/J mice. Evidence for the use of anticlonotypic antibody therapy in the control of malignancy. *J Immunol.* 1989; 143(4):1387-1395. (Biology)

Ramsdell F, Lantz T, Fowlkes BJ. A nondeletional mechanism of thymic self tolerance. *Science.* 1989; 246(4933):1038-1041. (Biology)

Tomonari K, Fairchild S, Rosenwasser OA. Influence of viral superantigens on V beta- and V alpha-specific positive and negative selection. *Immunol Rev.* 1993; 131:131-168. (Biology)

Wade T, Bill J, Marrack PC, Palmer E, Kappler JW. Molecular basis for the nonexpression of V beta 17 in some strains of mice. *J Immunol.* 1988; 141(6):2165-2167. (Biology)