

Technical Data Sheet

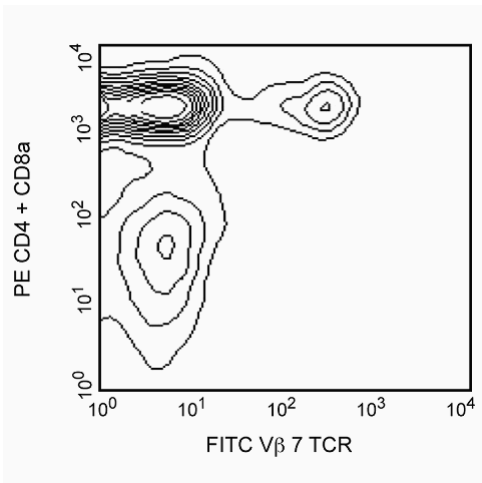
FITC Rat Anti-Mouse Vβ 7 T-Cell Receptor

Product Information

Material Number:	553215
Size:	0.25 mg
Concentration:	0.5 mg/ml
Clone:	TR310
Immunogen:	AKR/Cum Mouse spontaneous T Lymphoma Cell Line TK1
Isotype:	Rat (F344) IgG2b, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The TR310 antibody reacts with the Vβ 7 T-Cell Receptor (TCR) of strains having the *a* (e.g., C57BR, C57L, SJL), *b* (e.g., A, BALB/c, CBA/Ca, C3H/He, C57BL/6 mice), and *c* (e.g., RIII) haplotypes of the *Tcrb* gene complex. Vβ 7 is among the predominant TCRs expressed by NK-T cells of C57BL/6 mice. Vβ 7 TCR-bearing T lymphocytes are clonally eliminated in mice expressing superantigens encoded by *Mtv-7* (*Mls-1[a]*, *Mls[a]*) endogenous proviruses (e.g., AKR, CBA/J, C58, DBA/2, NZB). Activation or elimination of Vβ 7 TCR-expressing T cells by these determinants is partially dependent upon presentation by I-E. *Mtv-43* and/or exogenous MMTV-SW superantigens also cause incomplete elimination of Vβ 7 TCR-bearing T cells.



Two-color analysis of the expression of Vβ 7 TCR on peripheral T lymphocytes. SJL lymph node cells were simultaneously stained with FITC-conjugated TR310, PE-conjugated RM4-5 (anti-CD4, Cat. No. 553048/553049), and PE-conjugated 53-6.7 (anti-CD8a, Cat. No. 553032/553033) 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 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
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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
553048	PE Rat Anti-Mouse CD4	0.1 mg	RM4-5
553032	PE Rat Anti-Mouse CD8a	0.1 mg	53-6.7
553988	FITC 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/pharming/en/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

Bendelac A. Mouse NK1+ T cells. *Curr Opin Immunol.* 1995; 7(3):367-374.(Biology)

Hodes RJ, Abe R. Mouse endogenous superantigens: Mls and Mls-like determinants encoded by mouse retroviruses. In: Coligan JE, Kruisbeek AM, Margulies DH, Shevach EM, Strober W, ed. *Current Protocols in Immunology*. New York: John Wiley & Sons; 1996:A.1F.1-A.1F.5.(Biology)

Okada CY, Holzmann B, Guidos C, Palmer E, Weissman IL. Characterization of a rat monoclonal antibody specific for a determinant encoded by the V beta 7 gene segment. Depletion of V beta 7+ T cells in mice with Mls-1a haplotype. *J Immunol.* 1990; 144(9):3473-3477.(Immunogen)

Shinohara K, Ikarashi Y, Maruoka H, et al. Functional and phenotypical characteristics of hepatic NK-like T cells in NK1.1-positive and -negative mouse strains. *Eur J Immunol.* 1999; 29(6):1871-1878.(Biology)