

Technical Data Sheet

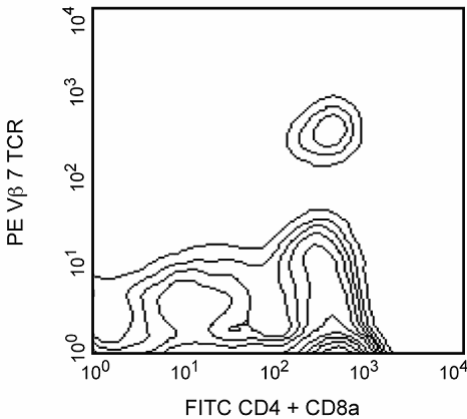
PE Rat Anti-Mouse Vβ 7 T-Cell Receptor

Product Information

Material Number:	553216
Size:	0.1 mg
Concentration:	0.2 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. BALB/c lymph node cells were simultaneously stained with PE-conjugated TR310, FITC-conjugated RM4-5 (anti-CD4, Cat. No. 553046/553047), and FITC-conjugated 53-6.7 (anti-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, $\kappa$ 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/pharmlngen/protocols](http://www.bdbiosciences.com/pharmlngen/protocols) for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at [www.bdbiosciences.com/pharmlngen/colors](http://www.bdbiosciences.com/pharmlngen/colors).
4. 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)  
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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)