Technical Data Sheet

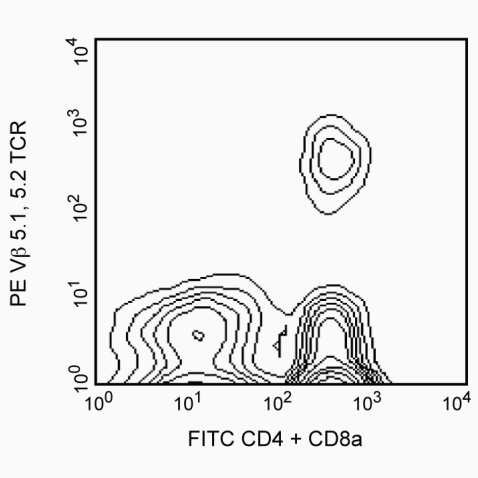
PE Mouse Anti-Mouse Vβ 5.1, 5.2 T-Cell Receptor

Product Information

Material Number:	**553190**
Alternate Name:	TCR Vβ5.1/5.2; Vβ5 T-cell receptor; T cell receptor beta 5
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	MR9-4
Immunogen:	Mouse T-Cell Hybridoma 2HB51.8
Isotype:	Mouse (SWR) IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The MR9-4 monoclonal antibody specifically recognizes the Vβ 5.1 and Vβ 5.2 T-cell Receptors of strains having the *b* haplotype (e.g., C57BL) of the *Tcrb* gene complex. These gene loci are deleted in mice having the *a* (e.g., C57BR, C57L, SJL, SWR) or *c* (e.g., RIII) *Tcrb* haplotype. Vβ5.1 and 5.2 TCR-bearing T lymphocytes are clonally eliminated, either completely or partially, in mice expressing I-E and superantigens encoded by the *Mtv-1 (Mls-4a, Mlsc), Mtv-3 (Mlsc), Mtv-8 (Mlsf), Mtv-9 (Etc-1, Mlsf), Mtv-11 (Mlsf), Mtv-13 (Mls-2a, Mlsc), Mtv-27, Mtv44 ,* and/or *Mtv-MAI* endogenous provirus (e.g., A, AKR, BALB/c, C3H/He, C58, CBA/Ca, CBA/J, DBA/2, NZB, NZW). Activation of Vβ5 TCR-expressing T cells by this determinant is dependent upon presentation by I-E. Plate-bound MR9-4 antibody activates Vβ5.1 or 5.2 TCR-bearing T cells.



Two-color analysis of the expression of Vβ 5.1, 5.2 TCR on peripheral T lymphocytes. *C57BL/6 lymph node cells were incubated simultaneously with PE Mouse Anti-Mouse Vβ 5.1, 5.2 T-Cell Receptor (Cat. No. 553190), FITC Rat Anti-Mouse CD4 (Cat. No. 553046/553047), and FITC Rat Anti-Mouse CD8a (Cat. No. 553030/553031) monoclonal antibodies. The fluorescence contour plot was derived from gated events based on the forward and side light-scattering of viable lymphocytes. Flow cytometry was performed on a BD FACScan™.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

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.

Application Notes

Application

Flow cytometry	Routinely Tested

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
550617	PE Mouse IgG1, κ Isotype Control	0.1 mg	MOPC-31C
553046	FITC Rat Anti-Mouse CD4	0.1 mg	RM4-5
553030	FITC Rat Anti-Mouse CD8a	0.1 mg	53-6.7
562086	PE Mouse Anti-Mouse Vβ 5.1, 5.2 T-Cell Receptor	25 µg	MR9-4
553047	FITC Rat Anti-Mouse CD4	0.5 mg	RM4-5
553031	FITC Rat Anti-Mouse CD8a	0.5 mg	53-6.7
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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