

Technical Data Sheet

Biotin Mouse Anti-Mouse Vβ 12 T-Cell Receptor

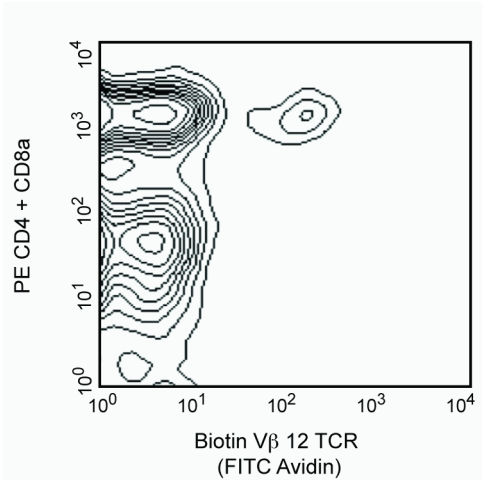
Product Information

Material Number:	553299
Size:	0.25 mg
Concentration:	0.5 mg/ml
Clone:	MR11-1
Immunogen:	Not Reported
Isotype:	Mouse (SWR) IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The MR11-1 antibody reacts with the Vβ 12 T-cell Receptor (TCR) of mice having the *b* haplotype (e.g., C57BL, C58, DBA/1) of the *Tcrb* gene complex1 The *Tcrb-V12* gene locus is deleted in mice having the *a* (e.g., C57BR, C57L, SJL, SWR) or *c* (e.g., RIII) haplotype. Vβ 12 TCR-bearing T lymphocytes are clonally eliminated in mice expressing I-E and superantigens encoded by *Mtv-8* (*Mlsf, Dvb11.1*), *Mtv-9* (*Etc-1, Mlsf, Dvb11.2*) and/or *Mtv-11* (*Mlsf, Dvb11.3*) proviruses (eg, A, AKR, BALB/c, CBA/J, C3H, DBA/2). Activation of Vβ 12 TCR-expressing T cells by these determinants is dependent upon presentation by I-E. C57BL/6 spleen T cells expressing Vβ 12 TCR are among the predominant responders to MAIDS virus superantigen.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



**Two-color analysis of the expression of Vβ12 TCR on peripheral lymphocytes.** C57BL/6 lymph node cells were incubated simultaneously with biotinylated MR11-1, PE-conjugated anti-mouse CD4 RM4-5 (Cat. No. 553048/553049), and PE-conjugated anti-mouse CD8a 53-6.7 (Cat. No. 553032/553033) monoclonal antibodies, followed by Avidin-FITC, Cat. No. 554057). 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 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
553048	PE Rat Anti-Mouse CD4	0.1 mg	RM4-5
553032	PE Rat Anti-Mouse CD8a	0.1 mg	53-6.7
554057	Avidin FITC	0.5 mg	(none)
550615	Biotin Mouse IgG1 κ Isotype Control	0.25 mg	MOPC-31C

## 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](http://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

Abe R, Kanagawa O, Sheard MA, Malissen B, Foo-Phillips M. Characterization of a new minor lymphocyte stimulatory system. I. Cluster of self antigens recognized by "I-E-reactive" V beta s, V beta 5, V beta 11, and V beta 12 T cell receptors for antigen. *J Immunol.* 1991; 147(3):739-749.(Biology)

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Haqqi TM, Banerjee S, Anderson GD, David CS. RIII S/J (H-2r). An inbred mouse strain with a massive deletion of T cell receptor V beta genes. *J Exp Med.* 1989; 169(6):1903-1909.(Biology)

Heise M, Chow K, Kanagawa O. Interaction between T cells and murine acquired immunodeficiency virus superantigen: effect of second signal on T cell reactivity to the MAIDS virus superantigen. *Int Immunol.* 1993; 5(6):583-590.(Biology)

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