

## Technical Data Sheet

FITC Rat Anti-Mouse V $\beta$  14 T-Cell Receptor

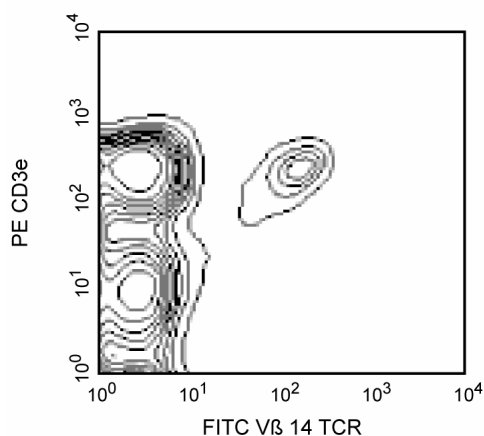
## Product Information

Material Number:	553258
Size:	0.25 mg
Concentration:	0.5 mg/ml
Clone:	14-2
Immunogen:	Mouse B10.A Helper T-Cell Clone J9.19
Isotype:	Rat (F344) IgM, $\kappa$
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

## Description

The 14-2 antibody reacts with the V $\beta$  14 T-Cell Receptor (TCR) of mice having the a (e.g., C57BR, C57L, SJL, SWR), b (e.g., A, AKR, BALB/c, CBA, C3H/He, C57BL, C58, DBA/1, DBA/2), and c (e.g., RIII) haplotypes of the Tcrb gene complex. V $\beta$  14 TCR-expressing T lymphocytes are completely eliminated in mice expressing I-E and the superantigens encoded by Mtv-2 endogenous provirus and/or MMTV-C3H, MMTV-GR, or MMTV-D2.GD exogenous virus. Recognition of these determinants by V $\beta$  14 TCR-expressing T cells is dependent upon presentation by I-E. Plate bound 14-2 antibody activates V $\beta$  14 TCR-bearing T cells.

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 V $\beta$  14 TCR on peripheral T lymphocytes. C57BL/6 lymph node cells were incubated simultaneously with biotinylated 14-2 and PE-conjugated 145-2C11 (anti-CD3e, Cat. No. 553063/553064) monoclonal antibodies, followed by Avidin-FITC (Cat. No. 554057). Flow cytometry was performed on a FACScan™ (BDIS, San Jose, CA).*

## Preparation and Storage

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.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

## Application Notes

## Application

Flow cytometry	Routinely Tested
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## Recommended Assay Procedure:

For flow cytometry of cell suspensions from peripheral lymphoid tissue, it is recommended that multicolor staining be performed to distinguish T lymphocytes from non-T cells.

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## Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
553063	PE Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
553942	FITC Rat IgM, $\kappa$ Isotype Control	0.25 mg	R4-22

## 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

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- Golovkina TV, Chervonsky A, Dudley JP, Ross SR. Transgenic mouse mammary tumor virus superantigen expression prevents viral infection. *Cell*. 1992; 69(4):637-645.(Clone-specific)
- 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)
- Liao NS, Maltzman J, Raulet DH. Positive selection determines T cell receptor V beta 14 gene usage by CD8+ T cells. *J Exp Med*. 1989; 170(1):135-143.(Immunogen)
- Marrack P, Kushnir E, Kappler J. A maternally inherited superantigen encoded by a mammary tumour virus. *Nature*. 1991; 349(6309):524-526.(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)