

Technical Data Sheet

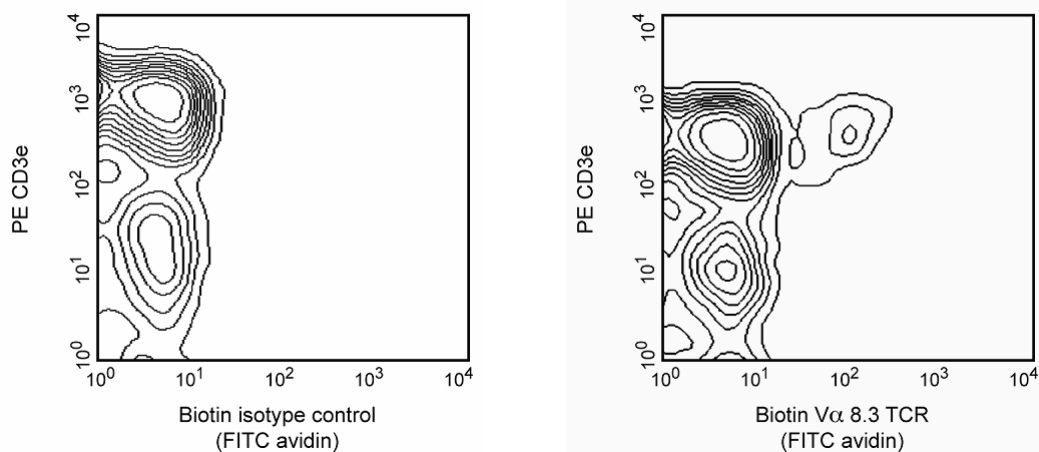
Biotin Rat Anti-Mouse V α 8.3 T-Cell Receptor

Product Information

Material Number:	557096
Size:	0.25 mg
Concentration:	0.5 mg/ml
Clone:	KT50
Immunogen:	Mouse T-cell clone C6
Isotype:	Rat (SD) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The KT50 antibody reacts with some members of the V α 8 T-cell Receptor (TCR) subfamily of mice having the *a*, *b*, *c*, and *d* haplotypes of the *Tcra* gene complex (e.g., all strains tested). It recognizes an epitope in the CDR1 of V α 8.3, but not V α 8.2, TCR subfamily member, as does the B21.14 mAb (Cat. no. 553374). Site-directed mutagenesis has identified three amino acids which are necessary for antibody reactivity and which are unique to V α 8.3 among the five functional V α 8 TCR subfamily members. On a common H-2[k] background, the frequency of V α 8.3 TCR-bearing T lymphocytes is higher in *Tcra*[*a/a*] mice than in *Tcra*[*a/b*] mice. Furthermore, studies of congenic strains suggest that CD8+ V α 8.3 TCR-bearing T lymphocytes undergo negative selection in mice expressing MHC class I antigens of the *H-2[d]* haplotype.



Expression of V α 8.3 TCR on peripheral T lymphocytes. BALB/c lymph node leukocytes were stained with PE-conjugated anti-mouse CD3e mAb 145-2C11 (Cat. no. 553063/553064) and either biotinylated rat IgG2a, κ isotype control mAb R35-95 (Cat. no. 553928, Panel A) or biotinylated mAb KT50 (Panel B), followed by Avidin-FITC (Cat. no. 554060). Viable lymphocytes were selected by exclusion of 7-AAD (BD Via-Probe™, Cat. no. 555815/555816) and scatter profile. Flow cytometry was performed on a BD FACScan™ System (BD Biosciences, 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 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

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.

BD Biosciences

www.bdbiosciences.com

United States 877.232.8995 Canada 888.259.0187 Europe 32.53.720.550 Japan 0120.8555.90 Asia Pacific 65.6861.0633 Latin America/Caribbean 55.11.5185.9995

For country-specific contact information, visit www.bdbiosciences.com/how_to_order/

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2007 BD



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
553928	Biotin Rat IgG2a κ Isotype Control	0.25 mg	R35-95
554060	FITC Streptavidin	0.5 mg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/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

- Brodnicki TC, Holman PO, Kranz DM. Reactivity and epitope mapping of single-chain T cell receptors with monoclonal antibodies. *Mol Immunol.* 1996; 33(3):253-263.(Biology)
- Tomonari K. Negative selection of Tcra-V8+CD8+ T cells by MHC class I molecules. *Immunogenetics.* 1992; 35(5):291-295.(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)
- Tomonari K, Lovering E, Fairchild S, Spencer S. Two monoclonal antibodies specific for the T cell receptor V alpha 8. *Eur J Immunol.* 1989; 19(6):1131-1135. (Immunogen)