Technical Data Sheet

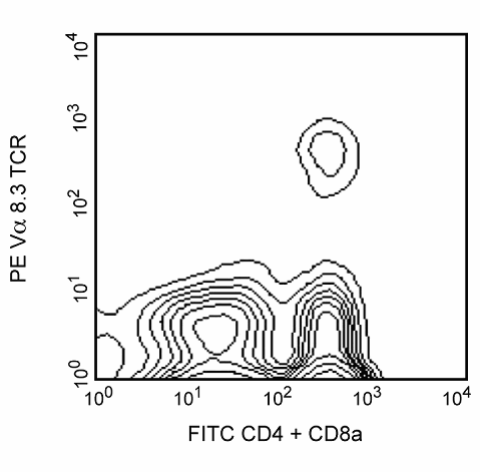
PE Rat Anti-Mouse Vα 8.3 TCR

Product Information

Material Number:	**553377**
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	B21.14
Immunogen:	Soluble αβ TCR from mouse cytotoxic T-cell clone CW3/1.1
Isotype:	Rat (LOU) IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The B21.14 antibody reacts with some members of the Vα 8 **T-c**ell **R**eceptor (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 Vα 8.3, but not Vα 8.2, TCR subfamily member, as does the KT50 mAb (Cat. No. 557096, for the biotinylated antibody). Site-directed mutagenesis has identified three amino acids which are necessary for antibody reactivity and which are unique to Vα 8.3 among the five functional Vα 8 TCR subfamily members. On a common H-2K[k] background and using the KT50 mAb, the frequency of Vα 8.3 TCR-bearing T lymphocytes has been demonstrated to be higher in *Tcra[a/a]* mice than in *Tcra[a/b]* mice. Furthermore, studies of congenic strains suggest that CD8+ Vα 8.3 TCR-bearing T lymphocytes undergo negative selection in mice expressing MHC class I antigens of the *H-2[d]* haplotype.



Two-color analysis of the expression of Vα 8.3 TCR on peripheral lymphocytes. *C57BL/6 lymph node cells were incubated simultaneously with PE-conjugated B21.14, FITC-conjugated anti-mouse CD4 RM4-5 (Cat. No. 553046/553047), and FITC-conjugated anti-mouse CD8a 53-6.7 (Cat. No. 553030/553031) monoclonal antibodies. 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 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

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
553925	PE Rat IgG1, κ Isotype Control	0.1 mg	R3-34
553046	FITC Rat Anti-Mouse CD4	0.1 mg	RM4-5
553030	FITC Rat Anti-Mouse CD8a	0.1 mg	53-6.7

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. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/pharmingen/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

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)

Necker A, Rebai N, Matthes M, et al. Monoclonal antibodies raised against engineered soluble mouse T cell receptors and specific for V alpha 8-, V beta 2- or V beta 10-bearing T cells. *Eur J Immunol.* 1991; 21(12):3035-3040.(Immunogen)

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)