

Technical Data Sheet

V450 Rat Anti-Mouse Va2 TCR

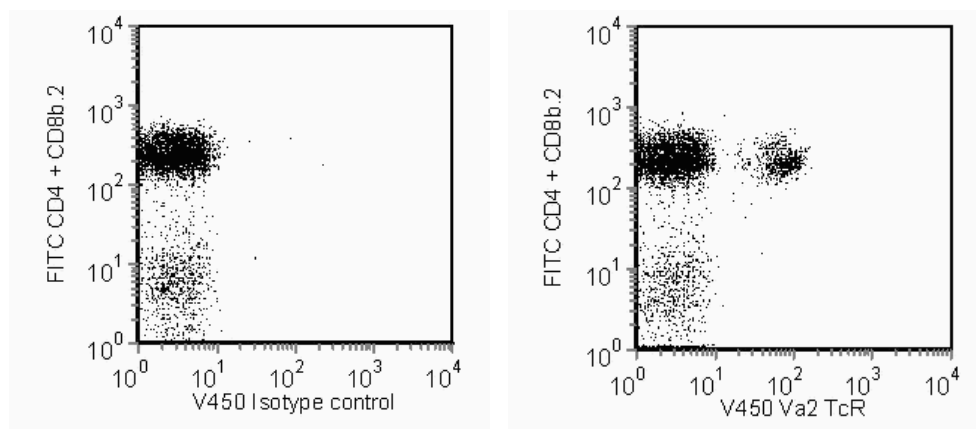
Product Information

Material Number:	560625
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	B20.1
Immunogen:	Soluble αβ TCR from mouse cytotoxic T-cell clone KB5-C20
Isotype:	Rat (LOU) IgG2a, λ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The B20.1 monoclonal antibody specifically binds to most members of the Va2 T-cell Receptor (TCR) subfamily in mice having the *a*, *b*, and *c* haplotypes of the *Tcrb* gene complex. B20.1 antibody may crossreact with Vδ8 TCR, which shares >90% sequence homology with Va2 TCR. Levels of B20.1+ T cells appear to be influenced by Va haplotypes. Moreover, the frequencies of Va2+ CD8+ and CD4+ T cells are influenced by H-2 haplotypes.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the Violet laser Ex max of 406 nm and has an Em Max at 450 nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.



Flow cytometric analysis of Va2 TcR on mouse lymph node cells. Lymph node cells from BALB/c mice were stained with FITC Rat Anti-Mouse CD4 (Cat. No. 553046) and FITC Rat Anti-Mouse CD8b.2 (Cat. No. 553040) in addition to either a BD Horizon™ V450 Rat IgG2a, λ isotype control (left panel) or with the BD Horizon™ V450 Rat Anti-Mouse Va2 TcR antibody (right panel). Dot plots were derived from gated events based on light scattering characteristics for lymph node cells. Flow cytometry was performed on a BD™ LSR II flow cytometry system.

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 BD Horizon™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
560723	V450 Rat IgG2a, λ Isotype Control	0.1 mg	B39-4
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553046	FITC Rat Anti-Mouse CD4	0.1 mg	RM4-5
553040	FITC Rat Anti-Mouse CD8b.2	0.5 mg	53-5.8

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.

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2. An isotype control should be used at the same concentration as the antibody of interest.
3. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
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.
5. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

- Gregoire C, Rebai N, Schweisguth F, et al. Engineered secreted T-cell receptor alpha beta heterodimers. *Proc Natl Acad Sci U S A*. 1991; 88(18):8077-8081. (Biology)
- Pircher H, Rebai N, Groettrup M, et al. Preferential positive selection of V alpha 2+ CD8+ T cells in mouse strains expressing both H-2k and T cell receptor V alpha a haplotypes: determination with a V alpha 2-specific monoclonal antibody. *Eur J Immunol*. 1992; 22(2):399-404. (Immunogen)
- 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)

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