

Technical Data Sheet

BV421 Rat Anti-Mouse Va2 TCR

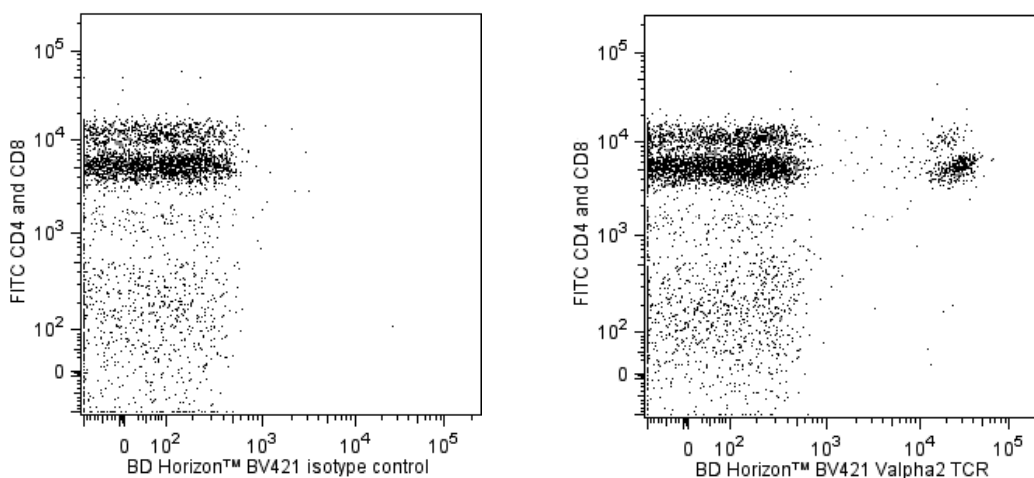
Product Information

Material Number:	562944
Alternate Name:	T cell receptor alpha, variable region 2
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 BSA 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 was conjugated to BD Horizon™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.



Flow cytometric analysis of Va2 TCR expression on mouse lymph node cells. Lymph node cells from a BALB/c mouse were stained with FITC Rat anti-Mouse CD4 (Cat. No. 553729/557307/561828) and FITC Rat anti-Mouse CD8b (Cat. No. 553040/561968) in addition to either a BD Horizon™ BV421 Rat IgG2a, λ isotype control (Cat. No. 562965, Left Panel) or with the BD Horizon™ BV421 Rat anti-Mouse Va2 TCR antibody (Cat. No. 562944, Right Panel). Two-color flow cytometric dot plots show the correlated expression of Va2 TCR (or Ig Isotype control staining) versus CD4 and CD8b were derived from gated events with the forward and side light-scattering characteristics of viable lymph node cells. Flow cytometry was performed using 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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
553729	FITC Rat Anti-Mouse CD4	0.5 mg	GK1.5
557307	FITC Rat Anti-Mouse CD4	0.1 mg	GK1.5
561828	FITC Rat Anti-Mouse CD4	25 µg	GK1.5
553040	FITC Rat Anti-Mouse CD8b.2	0.5 mg	53-5.8
561968	FITC Rat Anti-Mouse CD8b.2	0.1 mg	53-5.8
562965	BV421 Rat IgG2a, λ Isotype Control	50 µg	B39-4

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.

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. (Immunogen: Flow cytometry, Immunoprecipitation, Radioimmunoassay)

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: Immunofluorescence)

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. (Methodology)

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