Technical Data Sheet

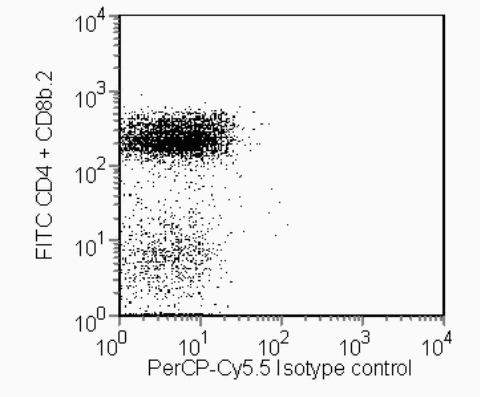
PerCP-Cy™5.5 Rat Anti-Mouse Vα2 TCR

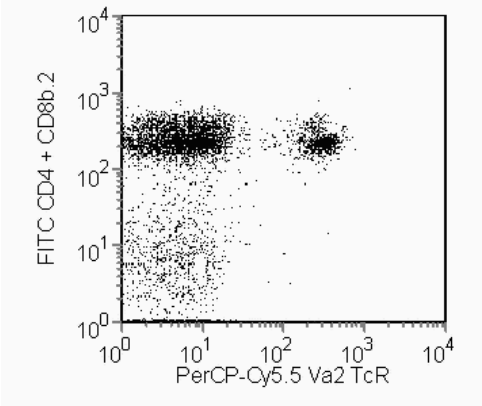
Product Information

Material Number:	**560529**
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 ≤0.09% sodium azide.

Description

The B20.1 monoclonal antibody specifically binds to most members of the Vα2 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 Vα2 TCR. Levels of B20.1+ T cells appear to be influenced by Vα haplotypes. Moreover, the frequencies of Vα2+ CD8+ and CD4+ T cells are influenced by H-2 haplotypes.





Flow cytometric analysis of Vα2 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 PerCP-Cy™5.5 Rat IgG2a, λ isotype control (left panel) or with the PerCP-Cy™5.5 Rat Anti-Mouse Vα2 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 PerCP-Cy5.5 under optimum conditions, and unconjugated antibody and free PerCP-Cy5.5 were removed. Storage of PerCP-Cy5.5 conjugates in unoptimized diluent is not recommended and may result in loss of signal intensity.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
560722	PerCP-Cy™5.5 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

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
4. This PerCP-conjugated product is sold under license to the following patent: US Patent No. 4,876,190.

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5. Cy is a trademark of Amersham Biosciences Limited. This conjugated product is sold under license to the following patents: US Patent Nos. 5,486,616; 5,569,587; 5,569,766; 5,627,027.
6. This product is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp. This product is licensed for sale only for research. It is not licensed for any other use. If you require a commercial license to use this product and do not have one return this material, unopened to BD Biosciences, 10975 Torreyana Rd, San Diego, CA 92121 and any money paid for the material will be refunded.
7. PerCP-Cy5.5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using dual-laser cytometers, which may directly excite both PerCP and Cy5.5™. We recommend the use of cross-beam compensation during data acquisition or software compensation during data analysis.
8. PerCP-Cy5.5–labelled antibodies can be used with FITC- and R-PE–labelled reagents in single-laser flow cytometers with no significant spectral overlap of PerCP-Cy5.5, FITC, and R-PE fluorescence.
9. 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.
10. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
11. Please refer to www.bdbiosciences.com/pharmingen/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, Rebaï 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)