

Technical Data Sheet

BUV496 Mouse Anti-Mouse V β 17[a] T-Cell Receptor

Product Information

Material Number:	749937
Size:	50 μ g
Clone:	KJ23
Alternative Name:	T cell receptor beta variable 17[a]; TCR Vb17[a]
Reactivity:	Mouse (Tested in Development)
Isotype:	Mouse BALB/c IgG2a, κ
Immunogen:	Mouse T cells
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing \leq 0.09% sodium azide.
Regulatory Status:	RUO

Description

The KJ23 monoclonal antibody specifically recognizes V β 17[a] T-cell Receptor (TCR) of mice having the a haplotype (eg, C57L, SJL, SWR) of the Tcrb gene complex. Strains having the b (eg, A, AKR, BALB/c, CBA, C3H/He, C57BL, C58, DBA/1, DBA/2) Tcrb haplotype do not express functional V β 17 TCR, and the Tcrb-V17 gene locus is deleted in mice having the c (eg, RIII) haplotype. V β 17[a] TCR-bearing T lymphocytes are clonally eliminated in mice expressing I-E (eg, C57BR). KJ23 antibody also recognizes two phenotypic variants of the V β 17[a] TCR: V β 17[a2] expressed in a variety of wild-derived mouse strains and V β 17[a(cz)] expressed in Mtv -free CZ mice. The effects of Mtv -encoded superantigens upon V β 17[a] TCR-bearing T cells has been reviewed. Plate-bound KJ23 antibody activates V β 17[a] TCR-bearing T cells, and injection of the antibody can deplete V β 17[a]-bearing T cells.

The antibody was conjugated to BD Horizon™ BUV496 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 with an Ex Max of 348-nm and an acceptor dye with an Em Max at 496-nm. BD Horizon BUV496 can be excited by the ultraviolet laser (355 nm) and detected with a 515/30 nm filter with a 450LP. Due to the excitation of the acceptor dye by other laser lines, there may be significant spillover into the channel detecting BD Horizon V500 or BV510 (eg, 525/40-nm filter). However, the spillover can be corrected through compensation as with any other dye combination.

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 BUV496 under optimal conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	
554657	Stain Buffer (BSA)	500 mL	
563794	Brilliant Stain Buffer	100 Tests	
555899	Lysing Buffer	100 mL	
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
565804	Red Nucleic Acid Stain	0.5 mL	

Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.
3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
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. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
8. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
9. BD Horizon Brilliant Ultraviolet 496 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,575,303; 8,354,239.

References

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