

## Technical Data Sheet

**BUV615 Mouse Anti-Mouse V $\beta$  17[a] T-Cell Receptor**

## Product Information

Material Number:	751234
Size:	50 $\mu$ 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, $\kappa$
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 $\beta$  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 $\beta$  17 TCR, and the Tcrb-V17 gene locus is deleted in mice having the c (eg, RIII) haplotype. V $\beta$  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 $\beta$  17[a] TCR: V $\beta$  17[a2] expressed in a variety of wild-derived mouse strains and V $\beta$  17[a(cz)] expressed in Mtv -free CZ mice. The effects of Mtv -encoded superantigens upon V $\beta$  17[a] TCR-bearing T cells has been reviewed. Plate-bound KJ23 antibody activates V $\beta$  17[a] TCR-bearing T cells, and injection of the antibody can deplete V $\beta$  17[a]-bearing T cells.

The antibody was conjugated to BD Horizon BUV615 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome with an Ex Max near 350 nm and an Em Max near 615 nm. BD Horizon Brilliant BUV615 can be excited by the ultraviolet laser (355 nm) and detected with a 610/20 filter and a 595 nm LP. Due to the excitation of the acceptor dye by the blue/yellow-green laser line, there may be significant spillover into channels detecting PE-CF594 like emissions (eg, 610/20-nm filter).

**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 to the dye under optimum conditions that minimize unconjugated dye and antibody.

**Recommended Assay Procedure**

BD™ CompBeads can be used as surrogates to assess fluorescence spillover (Compensation). When fluorochrome conjugated antibodies are bound to BD CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells, resulting in spillover values that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cells and BD CompBead to ensure that BD CompBeads are appropriate for your specific cellular application.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes 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. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Note: When using high concentrations of antibody, background binding of this dye to erythroid cell subsets (mature erythrocytes and precursors) has been observed. For researchers studying these cell populations, or in cases where light scatter gating does not adequately exclude these cells from the analysis, this background may be an important factor to consider when selecting reagents for panel(s).

## 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	
566385	Brilliant Stain Buffer Plus	1000 Tests	
566349	Brilliant Stain Buffer	1000 Tests	
613009	BUV615 Mouse IgG2a, $\kappa$ Isotype Control	50 $\mu$ g	G155-178
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. 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.
2. Researchers should determine the optimal concentration of this reagent for their individual applications.
3. An isotype control should be used at the same concentration as the antibody of interest.
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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
6. Please refer to [www.bdbiosciences.com/us/s/resources](http://www.bdbiosciences.com/us/s/resources) for technical protocols.
7. 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.
8. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
9. CF™ is a trademark of Biotium, Inc.
10. BD Horizon Brilliant Ultraviolet 615 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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