

Technical Data Sheet

BUV496 Mouse Anti-Mouse V β 5.1, 5.2 T-Cell Receptor

Product Information

Material Number:	750368
Size:	50 μ g
Clone:	MR9-4
Alternative Name:	TCR V β 5.1/5.2; V β 5 T-cell receptor; T cell receptor beta 5
Reactivity:	Mouse (Tested in Development)
Isotype:	Mouse SWR IgG1, κ
Immunogen:	Mouse T-Cell Hybridoma 2HB51.8
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	21577
Storage Buffer:	Aqueous buffered solution containing \leq 0.09% sodium azide.
Regulatory Status:	RUO

Description

The MR9-4 monoclonal antibody specifically recognizes the V β 5.1 and V β 5.2 T-cell Receptors of strains having the b haplotype (e.g., C57BL) of the Tcrb gene complex. These gene loci are deleted in mice having the a (e.g., C57BR, C57L, SJL, SWR) or c (e.g., RIII) Tcrb haplotype. V β 5.1 and 5.2 TCR-bearing T lymphocytes are clonally eliminated, either completely or partially, in mice expressing I-E and superantigens encoded by the Mtv-1 (Mls-4 α , Mlsc), Mtv-3 (Mlsc), Mtv-8 (Mlsf), Mtv-9 (Etc-1, Mlsf), Mtv-11 (Mlsf), Mtv-13 (Mls-2 α , Mlsc), Mtv-27, Mtv44, and/or Mtv-MAI endogenous provirus (e.g., A, AKR, BALB/c, C3H/He, C58, CBA/Ca, CBA/J, DBA/2, NZB, NZW). Activation of V β 5 TCR-expressing T cells by this determinant is dependent upon presentation by I-E. Plate-bound MR9-4 antibody activates V β 5.1 or 5.2 TCR-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 Section

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
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO	0.1 mg	
565804	Red Nucleic Acid Stain RUO	0.5 mL	
612949	BUV496 Mouse IgG1, κ Isotype Control X40 RUO	50 μ g	
554656	Stain Buffer (FBS) RUO	500 mL	
554657	Stain Buffer (BSA) RUO	500 mL	
563794	Brilliant Stain Buffer RUO	100 Tests	
555899	Lysing Buffer RUO	100 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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