

Technical Data Sheet

BV510 Hamster Anti-Mouse CD3e

Product Information

Material Number:	740113
Size:	50 µg
Clone:	500A2
Alternative Name:	CD3; CD3 epsilon; Cd3e; CD3ε; T3e
Reactivity:	Mouse (Tested in Development)
Isotype:	Syrian Hamster IgG2, κ
Immunogen:	Mouse T-cell receptor
Application:	Flow cytometry (Qualified)
Concentration:	0.2 mg/ml
Entrez Gene ID:	12501
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The 500A2 monoclonal antibody specifically binds to the 25-kDa ε chain of the T-cell receptor-associated CD3 complex expressed on mouse thymocytes, mature T lymphocytes, and NKT cells. Plate-bound and soluble forms of the 500A2 antibody can activate T cells in vitro. Activation of a mouse T-cell clone by the 500A2 antibody can be blocked by Fab fragments of the GK1.5 anti-CD4 antibody. This suggests that the 500A2 antibody may bind an epitope on CD3e close to a site at which CD4 associates with the T-cell receptor. The 500A2 antibody reportedly does not crossreact with rat leukocytes.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon Brilliant™ Violet family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon BV510 can be excited by the violet laser and detected in the BD Horizon V500 (525/50-nm) filter set. BD Horizon BV510 conjugates are useful for the detection of dim markers off the violet laser.

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 BV510 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
563202	BV510 Hamster IgG2, κ Isotype Control RUO	50 µg	
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	
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO	0.1 mg	

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 Violet 510 is covered by one or more of the following US patents: 8,575,303; 8,354,239.

References

Allison JP, Havran WL, Poenie M, et al. Expression and function of CD3 on murine thymocytes. In: Kappler J, Davis M, ed. *The T-Cell Receptor*, UCLA Symposia, 73rd Edition. Los Angeles: 1988; :33-45.

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Kubo RT, Born W, Kappler JW, Marrack P, Pigeon M. Characterization of a monoclonal antibody which detects all murine alpha beta T cell receptors. *J Immunol*. 1989; 142(8):2736-2742.

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Portoles P, Rojo J, Golby A, et al. Monoclonal antibodies to murine CD3 epsilon define distinct epitopes, one of which may interact with CD4 during T cell activation. *J Immunol*. 1989; 142(12):4169-4175.

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