Technical Data Sheet

V450 Hamster Anti-Mouse CD3e

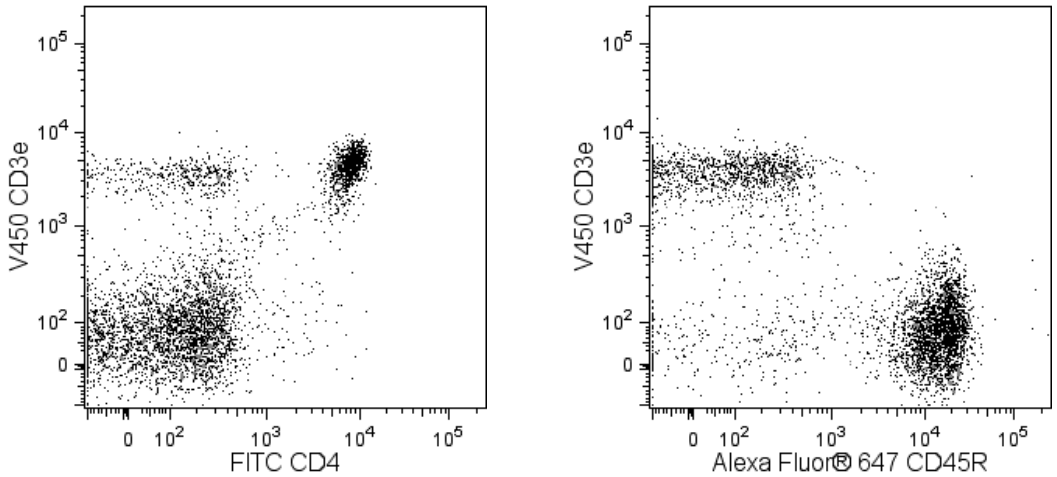
Product Information

Material Number:	**560801**
Alternate Name:	CD3ε chain
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	500A2
Immunogen:	Mouse T-cell receptor
Isotype:	Syrian Hamster IgG2, κ
Reactivity:	QC Tested: Mouse
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

This antibody has been reported to react with the 25-kDa ε chain of the T-cell receptor-associated CD3 complex expressed on thymocytes, mature T lymphocytes, and NK-T cells on many mouse stains. Plate-bound and soluble hamster anti-mouse CD3e (clone 500A2) antibody has been reported to activate unprimed T cells in vitro. Activation of a mouse T-cell clone by soluble hamster anti-mouse CD3e (clone 500A2) can be blocked by Fab fragments of anti-CD4 antibody GK1.5, suggesting that the hamster anti-mouse CD3e (clone 500A2) antibody may bind an epitope of CD3e close to a site at which CD4 associates with the T-cell receptor. This hamster mAb to a mouse leukocyte antigen has been reported not to cross-react with rat leukocytes.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the **V**iolet laser Ex max of 406 nm and has an Em Max at **450** nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.



Flow cytometric analysis of CD3 expression on mouse splenocytes using BD Horizon™ V450 anti-mouse CD3e. BALB/c mouse spleen cells were stained simultaneously with BD Horizon™ V450-conjugated anti-mouse CD3e antibody and Alexa Fluor® 647 anti-mouse CD45R (Cat. No.557683; right panel) or FITC anti-mouse CD4 (Cat. No.553047 ; left panel) antibody. Two-color flow cytometric dot plots showing the correlated expression patterns of CD3e and CD45R or CD3e and CD4 were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD™ LSRII System.

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Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
557683	Alexa Fluor® 647 Rat Anti-Mouse CD45R	0.1 mg	RA3-6B2
553047	FITC Rat Anti-Mouse CD4	0.5 mg	RM4-5
560563	V450 Hamster IgG2, κ Isotype Control	0.1 mg	B81-3

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
4. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
5. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
6. 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.

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. (Immunogen)

Havran WL, Poenie M, Kimura J, Tsien R, Weiss A, Allison JP. Expression and function of the CD3-antigen receptor on murine CD4+8+ thymocytes. *Nature.* 1987; 330(6144):170-173. (Clone-specific)

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. (Methodology)

Ortaldo JR, Winkler-Pickett R, Mason AT, Mason LH. The Ly-49 family: regulation of cytotoxicity and cytokine production in murine CD3+ cells. *J Immunol.* 1998; 160(1):1158-1165. (Clone-specific)

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. (Clone-specific)