

# Technical Data Sheet

## Oligo Hamster Anti-Mouse CD3e

### Product Information

Material Number:	940327
Size:	25 Tests
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:	Single Cell 3' Sequencing (Qualified)
Barcode Sequence:	TGCGGTCAGGTAGGGTGTGTAATTAATCGTATCTT
SeqID:	AMM2111
Volume Per Test:	2 μl
Entrez Gene ID:	12501
Storage Buffer:	Aqueous buffered solution containing BSA and ≤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.

#### Application Notes

The antibody was conjugated to an oligonucleotide that contains an antibody clone-specific barcode (ABC) flanked by a poly-A tail on the 3' end and a PCR handle (PCR primer binding site) on the 5' end. The ABC for this antibody was designed to be used with other BD AbSeq oligonucleotides conjugated to other antibodies. All AbSeq ABC sequences were selected in silico to be unique from human and mouse genomes, have low predicted secondary structure, and have high Hamming distance within the BD AbSeq portfolio, to allow for sequencing error correction and unique mapping. The poly-A tail of the oligonucleotide allows the ABC to be captured by the BD Rhapsody™ system. The 5' PCR handle allows for efficient sequencing library generation for Illumina sequencing platforms.

NOTE: The BD Rhapsody Single-Cell Analysis System must be used with the BD Rhapsody Express Instrument.

### 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 and conjugated to BD AbSeq oligonucleotide under optimal conditions.

### Recommended Assay Procedure

Put all BD AbSeq Reagents to be pooled into a Latch Rack for 500 μL Tubes (Thermo Fisher Scientific Cat. No. 4900). Arrange the tubes so that they can be easily uncapped and re-capped with an 8-Channel Screw Cap Tube Capper (Thermo Fisher Scientific Cat. No. 4105MAT) and the reagents aliquoted with a multi-channel pipette.

BD AbSeq tubes should be centrifuged for ≥ 30 seconds at 400 × g to ensure removal of any content in the cap/tube threads prior to the first opening.

### Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	
633701	Single-Cell Analysis System	1 Each	
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2

## Product Notices

1. This reagent has been pre-diluted for use at the recommended volume per test. Typical use is 2 µl for 1 × 10<sup>6</sup> cells in a 200-µl staining reaction.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. 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.
4. 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.
5. Illumina is a trademark of Illumina, Inc.
6. This product is covered by one or more of the following patents: US 8,835,358; US 9,290,808; US 9,290,809; US 9,315,857; US 9,567,645; US 9,567,646; US 9,598,736; US 9,708,659; and US 9,816,137. This product, and only in the amount purchased by buyer, may be used solely for buyer's own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. Diagnostic uses require a separate license.
7. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
8. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at [http://www.bdbiosciences.com/documents/hamster\\_chart\\_11x17.pdf](http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf).
9. Please refer to [bd.com/genomics-resources](http://bd.com/genomics-resources) for technical protocols.

## 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.
- 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.
- 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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