

Technical Data Sheet

Oligo Rat Anti-Mouse CD93 (Early B Lineage)

Product Information

Material Number:	940203
Size:	25 Tests
Clone:	AA4.1
Alternative Name:	Aa4; Cd93; C1qRp; C1qr1; Ly-68; Ly68; C1q/MBL/SPA receptor
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat SD, also known as Sprague-Dawley (outbred) IgG2b, κ
Immunogen:	Pre-B lymphoma 70Z/3, derived from (C57BL/6 x DBA/2)F1 mouse
Application:	Single Cell 3' Sequencing (Qualified)
Barcode Sequence:	GTAACGTGACGAAGAGTAATGATATGAGGGCCTGGT
SeqID:	AMM2099
Volume Per Test:	2 μ l
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.
Regulatory Status:	RUO

Description

The AA4.1 monoclonal antibody specifically recognizes the Early B Lineage antigen which is also known as CD93, AA4 antigen, Ly-68, and Complement component C1q receptor (C1qRp). This 130-140-kDa type I transmembrane glycoprotein is expressed on immature B lymphocytes in the adult bone marrow and on hematopoietic progenitors and stem cells in adult bone marrow, fetal liver, and embryonic yolk sac. Although CD93+ cells are most plentiful in adult mouse bone marrow, a smaller number of CD93+ cells which express lower CD93 levels can be detected in the adult spleen using bright fluorescent conjugates of the AA4.1 antibody or an amplified indirect immunofluorescent staining procedure. It has been observed that the staining pattern of the 493 monoclonal antibody is similar to that of the AA4.1 antibody, in that both antibodies precipitate molecules of the same molecular weight. Staining with the AA4.1 antibody is not blocked by the 493 antibody. These results suggest that the antibodies recognize separate epitopes on the same Early B Lineage antigen.

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 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 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 μ L 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 \times 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
633701	Single-Cell Analysis System RUO	1 Each	
554656	Stain Buffer (FBS) RUO	500 mL	
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO	0.1 mg	
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) 2.4G2 RUO	0.5 mg	

Product Notices

1. This reagent has been pre-diluted for use at the recommended volume per test. Typical use is 2 µl for 1 × 10⁶ cells in a 200-µl staining reaction.
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. Please refer to bd.com/genomics-resources for technical protocols.
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
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. Illumina is a trademark of Illumina, Inc.
8. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).

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