

Technical Data Sheet

Oligo Mouse Anti-Mouse CD45.1

Product Information

Material Number:	940133
Size:	25 Tests
Clone:	A20
Alternative Name:	Ly-5; Lyt4; CD45R; LCA; Ptprc; Protein tyrosine phosphatase receptor type C
Reactivity:	Mouse (Tested in Development)
Isotype:	Mouse A.SW IgG2a, κ
Immunogen:	SJL mouse thymocytes and splenocytes
Application:	Single Cell 3' Sequencing (Qualified)
Barcode Sequence:	GATGTTTCGGCGGGTATTCGTGGTTATTTATTCGGCT
SeqID:	AMM2029
Volume Per Test:	2 μ l
Entrez Gene ID:	19264
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.
Regulatory Status:	RUO

Description

The A20 monoclonal antibody specifically binds to CD45 (Leukocyte Common Antigen) on all leukocytes of mouse strains expressing the CD45.1 alloantigen (eg, RIII, SJL/J, STS/A, DA). This alloantigen was originally named Ly-5.2, but was later changed to Ly-5.1 to conform with the convention that the .2 alloantigen designates the C57BL/6 strain. mAb A20 has been reported not to react with leukocytes of most other mouse strains which express the CD45.2 alloantigen. CD45 is a member of the Protein Tyrosine Phosphatase (PTP) family; its intracellular (COOH-terminal) region contains two PTP catalytic domains while the extracellular region is highly variable due to alternative splicing of exons 4, 5, and 6 (designated A, B, and C, respectively), and differing levels of glycosylation. CD45 isoforms in the mouse are cell type-, maturation-, and activation state-specific. The CD45 isoforms play complex roles in T-cell and B-cell antigen receptor signal transduction. The A20 antibody has been reported to inhibit some responses of B cells (from mice expressing the CD45.1 alloantigen) to antigens and LPS.

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 $2 \mu\text{l}$ for 1×10^6 cells in a $200\text{-}\mu\text{l}$ 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).

References

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