Technical Data Sheet

Oligo Rat Anti-Mouse Pre-B Cell Receptor

Product Information

Material Number:	940323
Size:	25 Tests
Clone:	SL156
Alternative Name:	Pre-BCR
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat LEW, also known as Lewis IgG2a, κ
Immunogen:	Purified soluble complex of recombinant μ IgH, λ5, and VpreB
Application:	Single Cell 3' Sequencing (Qualified)
Barcode Sequence:	CCGTAGTGCGATTTGGCGTGTATATTGGTTAGTGGC
SeqID:	AMM2107
Volume Per Test:	2 μl
Entrez Gene ID:	0
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The pre-B cell receptor (pre-BCR) expressed during the early stages of B lymphocyte development is a heterodimer of immunoglobulin heavy chain (IgH) with surrogate light chain, which is an Ig-light-chain-like molecule composed of the non-covalently linked Lambda 5 (λ5) and VpreB proteins. The pre-BCR is believed to control IgH repertoire selection and proliferation of differentiating B lymphocytes. The SL156 antibody reacts with a conformational epitope of the pre-BCR in transfected X63-Ag8.653 cells but not with surrogate light chain, λ5, or VpreB in the absence of IgH. It detects pre-BCR on pre-B cell lines, but not on pro-B cell lines or IgM-positive splenocytes. It also detects pre-BCR on the surface of pre-B cells, but not on Ig light chain (IgL)-positive B lymphocytes, from the bone marrow of normal mice. It has been noted that the cell-surface expression of pre-BCR is upregulated after a one-hour incubation of bone-marrow leukocytes in tissue culture medium at 37°C. After immunization, cell-surface pre-BCR is detected on a subset of splenic IgL+ germinal-center B lymphocytes.

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 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) RUO	500 mL	
633701	Single-Cell Analysis System RUO	1 Each	
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 × 10^6 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. Please refer to bd.com/genomics-resources for technical protocols.

References

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