

Technical Data Sheet

Oligo Mouse Anti-Human CD371 (Clec12A)

Product Information

Material Number:	940212
Size:	25 Tests
Clone:	50C1
Alternative Name:	CD371; Clec12A; MICL; CLL-1; DCAL-2
Reactivity:	Human (Tested in Development)
Isotype:	Mouse BALB/c IgG2a, κ
Immunogen:	Human CLEC12A Transfected Cell Line
Application:	Single Cell 3' Sequencing (Qualified)
Barcode Sequence:	TTTGCGTAGGTAGCGTATTGAATCGTTTGGTGCTT
SeqID:	AHS0097
Volume Per Test:	2 μ l
Workshop No.:	X 10-73
Entrez Gene ID:	160364
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.
Regulatory Status:	RUO

Description

The 50C1 monoclonal antibody specifically binds to human CD371 which is also known as Clec12A (C-type lectin domain family 12 member A), C-type lectin-like molecule 1 (CLL-1), myeloid inhibitory C-type lectin-like receptor (MICL), or dendritic cell-associated lectin 2 (DCAL-2). It is expressed on a variety of cells including monocytes, macrophages, dendritic cells, and granulocytes and perhaps some NK cells. Clec12A is a member of the C-type lectin/C-type lectin-like domain (CTL/CTLD) superfamily. It is a 30 kDa type II transmembrane glycoprotein that has one single C-type lectin-like domain and one cytoplasmic immunoreceptor tyrosine-based inhibitory motif (ITIM). Clec12A has similarity with the β -glucan receptor (Dectin-1) and LOX-1 with high N-glycosylation. There are at least five isoforms due to alternative transcript splicing. Signaling through Clec12A can induce internalization of Clec12A, dendritic cell maturation and the production of cytokines including IL-12. Clec12A may also serve as a negative regulator of activated leukocytes recruited to sites of inflammation.

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 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
554656	Stain Buffer (FBS)	500 mL
633701	Single-Cell Analysis System	1 Each
564219	Human BD Fc Block™	50 mg
564220	Human BD Fc Block™	0.25 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. 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

Chen CH, Floyd H, Olson NE, et al. Dendritic-cell-associated C-type lectin 2 (DCAL-2) alters dendritic-cell maturation and cytokine production. *Blood*. 2006; 107(4):1459-1467.

Lahoud MH, Proietto AI, Ahmet F, et al. The C-type lectin Clec12A present on mouse and human dendritic cells can serve as a target for antigen delivery and enhancement of antibody responses.. *J Immunol*. 2009; 182(12):7587-94.

Marshall AS, Willment JA, Lin HH, Williams DL, Gordon S, Brown GD. Identification and characterization of a novel human myeloid inhibitory C-type lectin-like receptor (MICL) that is predominantly expressed on granulocytes and monocytes.. *J Biol Chem*. 2004; 279(15):14792-802.

Marshall AS, Willment JA, Pyz E, et al. Human MICL (CLEC12A) is differentially glycosylated and is down-regulated following cellular activation.. *Eur J Immunol*. 2006; 36(8):2159-69.

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