

Technical Data Sheet

Oligo Mouse Anti-Human CD85k

Product Information

Material Number:	940261
Size:	25 Tests
Clone:	ZM3.8
Alternative Name:	LILRB4; ILT-3; HM18; LIRB4; LIR-5
Reactivity:	Human (Tested in Development)
Isotype:	Mouse BALB/c IgG1
Immunogen:	Human ILT3 Recombinant Protein
Application:	Single Cell 3' Sequencing (Qualified)
Barcode Sequence:	AGTAGTCGTAGTTGGCGTGAATTGGGCTTATATCTG
SeqID:	AHS0179
Volume Per Test:	2 µl
Workshop No.:	VII 70358
Entrez Gene ID:	11006
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The ZM3.8 monoclonal antibody specifically binds to CD85k which is also known as Immunoglobulin-like transcript 3 (ILT-3) and Monocyte inhibitory receptor HM18. CD85k is encoded by LILRB4 (Leukocyte immunoglobulin-like receptor, subfamily B member 4) and is expressed as a type I transmembrane glycoprotein. CD85k is comprised of two C2-type Ig domains, a transmembrane region, and a cytoplasmic tail with three immunoreceptor tyrosine-based inhibitory motifs (ITIMs). CD85k is selectively expressed by myeloid antigen presenting cells including monocytes, macrophages, and dendritic cells. CD85k functions as an inhibitory receptor. ILT3 can also function in antigen capture and presentation. It is efficiently internalized upon cross-linking, and delivers its ligand to an intracellular compartment where it is processed and ultimately presented by APCs to T cells. Thus, ILT3 is a novel inhibitory receptor that can negatively regulate activation of APCs and can be used by APCs for antigen uptake. ILT3 expression is upregulated on tolerogenic dendritic cells that can induce regulatory T cells.

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

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

Dobrowolska H, Gill KZ, Serban G, et al. Expression of immune inhibitory receptor ILT3 in acute myeloid leukemia with monocytic differentiation. *Cytometry*. 2013; 84(1):21-29.

Kim-Schulze S, Seki T, Vlad G, et al. Regulation of ILT3 gene expression by processing of precursor transcripts in human endothelial cells. *Transplantation*. 2006; 6(1):76-82.

Penna G, Roncari A, Amuchastegui S, et al. Expression of the inhibitory receptor ILT3 on dendritic cells is dispensable for induction of CD4⁺Foxp3⁺ regulatory T cells by 1,25-dihydroxyvitamin D3. *Blood*. 2005; 106(10):3490-3497.

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