

Technical Data Sheet

Oligo Mouse Anti-Human Endosialin (CD248)

Product Information

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| Material Number: | 940242 |
| Size: | 25 Tests |
| Clone: | B1/35 |
| Alternative Name: | Endosialin; TEM1; CD164L1 |
| Reactivity: | Human (Tested in Development) |
| Isotype: | Mouse IgG1, κ |
| Immunogen: | Diploid human fibroblasts |
| Application: | Single Cell 3' Sequencing (Qualified) |
| Barcode Sequence: | ATCACTTATTTTCGTTTGAGGGTTCGTAGGCGTTGC |
| SeqID: | AHS0156 |
| Volume Per Test: | 2 μ l |
| Entrez Gene ID: | 57124 |
| Storage Buffer: | Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide. |
| Regulatory Status: | RUO |

Description

The B1/35 monoclonal antibody specifically binds to CD248 which is also known as Endosialin, Tumor endothelial marker 1 (TEM1), and CD164 sialomucin-like 1 (CD164L1). CD248 is a heavily glycosylated, single-pass type I transmembrane protein. CD248 belongs to the Group XIV C-Type lectin family that includes CD93 and CD141/thrombomodulin. It is expressed on pericytes and stromal fibroblasts. Although the exact functions of CD248 remain to be determined, its expression is associated with angiogenesis and lymphoid tissue organization during development, as well as, with postnatal inflammation and tumor development and growth.

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 |
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| 554656 | Stain Buffer (FBS) RUO | 500 mL | |

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| 633701 | Single-Cell Analysis System RUO | 1 Each |
| 564219 | Human BD Fc Block™ RUO | 50 mg |
| 564220 | Human BD Fc Block™ RUO | 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

Christian S, Ahorn H, Koehler A, et al. Molecular cloning and characterization of endosialin, a C-type lectin-like cell surface receptor of tumor endothelium. *J Biol Chem.* 2000; 276(10):7408-7414.

MacFadyen JR, Haworth O, Roberston D, et al. Endosialin (TEM1, CD248) is a marker of stromal fibroblasts and is not selectively expressed on tumour endothelium. *FEBS Lett.* 2005; 579(12):2569-2575.

Rettig WJ, Garin-Chesa P, Healey JH, Su SL, Jaffe EA, Old LJ. Identification of endosialin, a cell surface glycoprotein of vascular endothelial cells in human cancer. *Proc Natl Acad Sci U S A.* 1992; 89(22):10832-10836.

St Croix B, Rago C, Velculescu V, et al. Genes expressed in human tumor endothelium. *Science.* 2000; 289(5482):1197-1202.

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