

Technical Data Sheet

Oligo Rat Anti-Mouse CD134

Product Information

Material Number:	940336
Size:	25 Tests
Clone:	OX-86
Alternative Name:	Tnfrsf4; Ox40; OX40L receptor; Ly-70; ACT35; Txgp1; TXGP1L
Reactivity:	Mouse (Tested in Development)
Isotype:	Rat AO IgG1, κ
Immunogen:	Recombinant Mouse OX-40 3/4 CD4 Chimeric Protein
Application:	Single Cell 3' Sequencing (Qualified)
Barcode Sequence:	AGGATGATTTGGCGATGTTACGTTTGTGCGATTATG
SeqID:	AMM2120
Volume Per Test:	2 μ l
Entrez Gene ID:	22163
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.
Regulatory Status:	RUO

Description

The OX-86 monoclonal antibody specifically binds to the OX-40 antigen (CD134), also known as OX-40L receptor. CD134 is a 50-kDa type-I membrane glycoprotein that belongs to the NGFR/TNFR superfamily. Mouse CD134 is expressed on activated CD4+ and CD8+ T lymphocytes and has been shown to be the sole receptor for the OX-40 Ligand (OX-40L). In the brains of mice with actively induced experimental allergic encephalomyelitis, the expression of CD134 on CD4+ T lymphocytes correlates with disease progression. The OX-40/OX-40L system supplies a costimulatory signal for T-cell proliferation and B-cell proliferation and differentiation. In addition, OX-40 antigen provides a costimulatory signal that induces T cells to proliferate in a CD28-independent manner. In the intact animal, CD134 does not appear to be essential for many T-cell responses, but it seems to play a major role in the pathogenesis of some autoimmune diseases. The OX-86 mAb stains both CD4+ and CD8+ activated T cells, and this expression pattern has been confirmed using OX-40L-Ig fusion protein. CD134 was also detected, using OX-86 mAb, on B cells after stimulation with anti-IgM plus anti-CD40 mAb HM40-3 (Cat. no. 553721). OX-86 mAb does not block binding of OX-40L to OX-40, and it stimulates T-cell proliferation mildly.

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	Clone
554656	Stain Buffer (FBS)	500 mL	
633701	Single-Cell Analysis System	1 Each	
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 mg	2.4G2

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

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