

# Technical Data Sheet

## Oligo Mouse Anti-Mouse H-2D[d]

### Product Information

Material Number:	940423
Size:	25 Tests
Clone:	34-2-12
Alternative Name:	Histocompatibility-2Dd; H-2Dd
Reactivity:	Mouse (Tested in Development)
Isotype:	Mouse C3H, also known as C3H/He, C3H/Bi IgG2a, $\kappa$
Immunogen:	(C57BL/6 x DBA/2)F1 mouse splenocytes
Application:	Single Cell 3' Sequencing (Qualified)
Barcode Sequence:	ATGGAGGTTTCGTGACTTAATCGTGTTCGTTGTTCTT
SeqID:	AMM2180
Volume Per Test:	2 $\mu$ l
Entrez Gene ID:	14964
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.
Regulatory Status:	RUO

### Description

The 34-2-12 antibody (also known as 34-2-12S) recognizes the  $\alpha 3$  domain of the H-2D[d]. The binding of the antibody to its epitope is independent of the  $\alpha 1$  and  $\alpha 2$  domains and  $\beta 2$  microglobulin. It cross-reacts with cells of the C3H.LG/Ckc strain. Reactivity with other haplotypes (eg, b, f, k, p, q, r, s ) has not been observed. Soluble mAb 34-2-12 blocks binding of the Ly-49A-expressing T lymphoma EL4 to immobilized H-2D[d]. However, further studies utilizing this mAb indicate that the  $\alpha 3$  domain is not involved in the interaction between Ly-49A, or Ly-49G2, and H-2D[d].

### 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  $\mu$ 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  $\geq 30$  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) 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<sup>6</sup> 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](http://bd.com/genomics-resources) for technical protocols.

## References

- Daniels BF, Karlhofer FM, Seaman WE, Yokoyama WM. A natural killer cell receptor specific for a major histocompatibility complex class I molecule. *J Exp Med.* 1994; 180(2):687-692.
- Evans GA, Margulies DH, Shykind B, Seidman JG, Ozato K. Exon shuffling: mapping polymorphic determinants on hybrid mouse transplantation antigens. *Nature.* 1982; 300(5894):755-757.
- Kane KP. Ly-49 mediates EL4 lymphoma adhesion to isolated class I major histocompatibility complex molecules. *J Exp Med.* 1994; 179(3):1011-1015.
- Karlhofer FM, Ribaldo RK, Yokoyama WM. MHC class I alloantigen specificity of Ly-49+ IL-2-activated natural killer cells. *Nature.* 1992; 358(6381):66-70.
- Mason LH, Ortaldo JR, Young HA, Kumar V, Bennett M, Anderson SK. Cloning and functional characteristics of murine large granular lymphocyte-1: a member of the Ly-49 gene family (Ly-49G2). *J Exp Med.* 1995; 182(2):293-303.
- McCluskey J, Bluestone JA, Coligan JE, Maloy WL, Margulies DH. Serologic and T cell recognition of truncated transplantation antigens encoded by in vitro deleted class I major histocompatibility genes. *J Immunol.* 1986; 136(4):1472-1481.
- McCluskey J, Germain RN, Margulies DH. Cell surface expression of an in vitro recombinant class II/class I major histocompatibility complex gene product. *J Immunol.* 1985; 40(2):247-257.
- Otten GR, Bikoff E, Ribaldo RK, Kozlowski S, Margulies DH, Germain RN. Peptide and beta 2-microglobulin regulation of cell surface MHC class I conformation and expression. *J Immunol.* 1992; 148(12):3723-3732.
- Ozato K, Mayer NM, Sachs DH. Monoclonal antibodies to mouse major histocompatibility complex antigens. *Transplantation.* 1982; 34(3):113-120.

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