Technical Data Sheet

Oligo Mouse Anti-Granzyme B

Product Information

Material Number:	940517
Size:	25 Tests
Clone:	GB11
Alternative Name:	GZMB; Granzyme-2; CCPI; CGL1; CSPB; CTLA1; CTSGL1; GRB; HLP; SECT
Reactivity:	Tested in Development:Human,Mouse
Isotype:	Mouse BALB/c IgG1, κ
Application:	Single Cell 3' Sequencing Intracellular CITE-seq(Tested During Development)
Barcode Sequence:	TAATTTGTTGAGCGCGAGATATATGTAGCAGGAGTC
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The GB11 antibody specifically reacts with human granzyme B, a serine protease of approximately 32 kDa. Granzyme B is stored in the granules of cytotoxic T lymphocytes and NK cells along with the pore-forming protein perforin. In the classic model of target cell lysis, perforins create holes in the target cell membrane allowing entrance of granzymes. Granzyme B has been shown to act on specific substrates including caspase-3, -7, -9, and -10 which in turn give rise to enzymes that mediate apoptosis. Granzyme B may also be involved in the hydrolysis of extracellular matrix components. Detectable levels of granzyme B have been detected in sera from healthy volunteers. The immunogen used to generate the GB11 hybridoma was human granzyme B isolated from an NK cell line.

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.

When using BD® AbSeq intracellular markers with the Single Cell 3' Sequencing Intracellular CITE-seq, cells must first be fixed and permeabilized using the BD Rhapsody™ Intracellular AbSeq Buffer Kit before the antibody-oligo can bind to the protein. Refer to the list of required companion products below and see BD Rhapsody™ System Single-Cell Labelling with BD® AbSeq Ab-Oligos for Intracellular CITE-seq (Doc ID: 23-24464) for the complete BD® AbSeq intracellular multiomics staining protocol. Contact your local Field Application Specialist (FAS) for additional guidance.

Use standard laboratory safety protocols. Read and understand the safety data sheets (SDSs) before handling chemicals. To obtain SDSs, go to regdocs.bd.com or contact BD Biosciences technical support at scomix@bdscomix.bd.com.

Warning: All biological specimens and materials contacting them are considered biohazardous. Handle as if capable of transmitting infection and dispose of with proper precautions in accordance with federal, state, and local regulations. Never pipette by mouth. Wear suitable protective clothing, eyewear, and gloves.

Suggested Companion Products

Catalog Number	Name	Size
570742	Intracellular AbSeq Buffer Kit	1 Each
570750	AbSeq Enhancer Kit	1 Each
570908	OMICS-Guard Sample Preservation Buffer Kit	12 Each
570751	RNase Inhibitor	1 Each
633801	Whole Transcriptome Analysis (WTA) Amplification Kit	1 Each

554656	Stain Buffer (FBS)	500 mL
666262	8-Lane Cartridge	1 Each
564219	Human BD Fc Block™	50 µg
664887	Enhanced Cartridge Reagent Kit	1 Each
633733	Cartridge Kit	1 Each
625970	Immune Discovery Panel	5 Tests
633773	cDNA Kit	1 Each
633781	Hu Single Cell Sample Multiplexing Kit	1 Each
570911	OMICS-Guard Sample Preservation Buffer	50 mL
633707	Express Single-Cell Analysis System Package	1 EA
633701	Single-Cell Analysis System	1 EA

Product Notices

1. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
2. This reagent has been pre-diluted for use at the recommended volume per test. Typical use is 2 µl for 1 × 10^6 cells in a 200-µl staining reaction.
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. Please refer to http://regdocs.bd.com to access safety data sheets (SDS).
7. Please refer to bd.com/genomics-resources for technical protocols.
8. Species cross-reactivity detected in product development may not have been confirmed on every format and/or application.
9. Illumina is a trademark of Illumina, Inc.
10. For U.S. patents that may apply, see bd.com/patents.

References

Poe M, Blake JT, Boulton DA. Human cytotoxic lymphocyte granzyme B. Its purification from granules and the characterization of substrate and inhibitor specificity. J Biol Chem. 1991; 266(1):98-103. (Biology).

Hamann D, Baars PA, Rep MH. Phenotypic and functional separation of memory and effector human CD8+ T cells. J Exp Med. 1997; 186(9):1407-1418. (Clone-specific: Intracellular Staining/Flow Cytometry).

Ronday HK, van der Laan WH, Tak PP et al. Human granzyme B mediates cartilage proteoglycan degradation and is expressed at the invasive front of the synovium in rheumatoid arthritis. Rheumatology (Oxford). 2001; 40:55-61. (Biology).

Smyth MJ, Kelly JM, Sutton VR et al. Unlocking the secrets of cytotoxic granule proteins. J Leukoc Biol. 2001; 70:18-29. (Biology).

Spaeny-Dekking EH, Hanna WL, Wolbink AM et al. Extracellular granzymes A and B in humans: detection of native species during CTL responses in vitro and in vivo. J Immunol. 1998; 160:3610. (Immunogen: ELISA, Radioimmunoassay).

Trapani JA, Klein JL, White PC, and Dupont B. Molecular cloning of an inducible serine esterase gene from human cytotoxic lymphocytes. Proc Natl Acad Sci U S A. 1988; 5:6924-6928. (Biology).

Trapani JA, Smyth MJ, Apostolidis VA, Dawson M, and Browne KA. Granule serine proteases are normal nuclear constituents of natural killer cells. J Biol Chem. 1994; 269:18359-18365. (Biology).

Wever PC, Van Der Vliet HJ, Spaeny LH . The CD8+ granzyme B+ T-cell subset in peripheral blood from healthy individuals contains activated and apoptosis-prone cells. Immunology. 1998; 93(3):383-389. (Immunogen: ELISA, Flow cytometry, Immunoprecipitation, Intracellular Staining/Flow Cytometry, Radioimmunoassay).

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.268.5430	32.53.720.550	0120.8555.90	65.6861.0633	0800.771.7157

For country contact information, visit bdbiosciences.com/contact