

## Technical Data Sheet

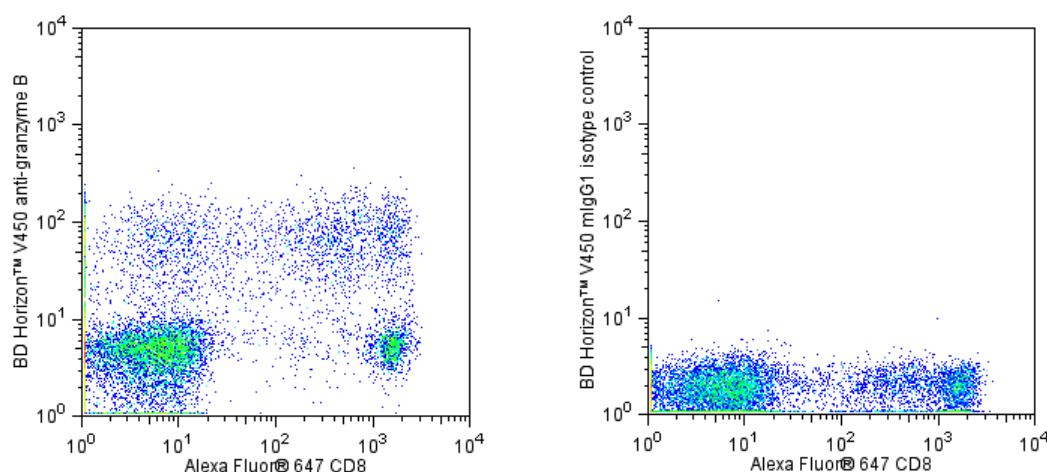
**V450 Mouse anti-Human Granzyme B****Product Information**

|                         |                                                                                  |
|-------------------------|----------------------------------------------------------------------------------|
| <b>Material Number:</b> | <b>561151</b>                                                                    |
| <b>Alternate Name:</b>  | GZMB; Granzyme-2; CCPI; CGL1; CSPB; CTLA1; CTSLG1; GRB; HLP; SECT                |
| <b>Size:</b>            | 50 tests                                                                         |
| <b>Vol. per Test:</b>   | 5 µl                                                                             |
| <b>Clone:</b>           | GB11                                                                             |
| <b>Immunogen:</b>       | Human Granzyme B                                                                 |
| <b>Isotype:</b>         | Mouse IgG1, κ                                                                    |
| <b>Reactivity:</b>      | QC Testing: Human                                                                |
| <b>Storage Buffer:</b>  | Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide. |

**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.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the Violet laser Ex max of 406 nm and has an Em Max at 450 nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.



**Flow cytometric analysis of Granzyme B expression by peripheral blood lymphocytes.** Human PBMC were fixed with BD Cytofix™ Fixation Buffer (Cat. No. 554655) and permeabilized with BD Perm/Wash™ Buffer (Cat. No. 554723). The cells were then stained with Alexa Fluor® 647 Mouse Anti-Human CD8 (Cat. No. 557708) and either BD Horizon™ V450 Mouse Anti-Human Granzyme B antibody (Cat. No. 561151; Left Panel) or BD Horizon™ V450 Mouse IgG1 Isotype Control (Cat. No. 560373; Right Panel). Two-color flow cytometric dot plots showing the correlated expression patterns of CD8 and Granzyme B or Mouse IgG1 Isotype Control staining were derived from gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD LSR™ II Flow Cytometer System.

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## 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.

The antibody was conjugated with BD Horizon™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.

## Application Notes

### Application

|                                         |                  |
|-----------------------------------------|------------------|
| Intracellular staining (flow cytometry) | Routinely Tested |
|-----------------------------------------|------------------|

## Suggested Companion Products

| Catalog Number | Name                                  | Size      | Clone   |
|----------------|---------------------------------------|-----------|---------|
| 554655         | Fixation Buffer                       | 100 ml    | (none)  |
| 554723         | Perm/Wash Buffer                      | 100 ml    | (none)  |
| 557708         | Alexa Fluor® 647 Mouse Anti-Human CD8 | 100 tests | RPA-T8  |
| 560373         | V450 Mouse IgG1, κ Isotype Control    | 0.1 mg    | MOPC-21 |
| 554656         | Stain Buffer (FBS)                    | 500 ml    | (none)  |

## Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  cells in a 100-μl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
4. 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.
5. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
7. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.

## References

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