

## Technical Data Sheet

## PE-CF594 Mouse Anti-Human Granzyme B

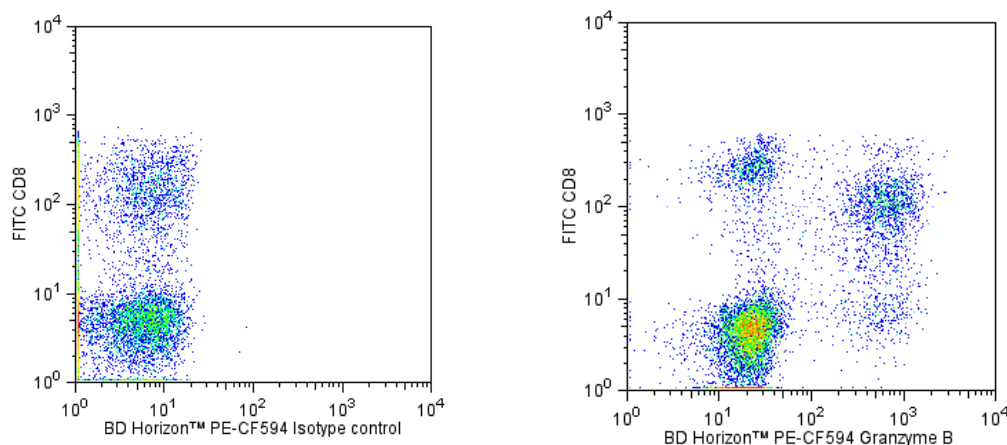
## Product Information

|                         |                                                                   |
|-------------------------|-------------------------------------------------------------------|
| <b>Material Number:</b> | <b>562462</b>                                                     |
| <b>Alternate Name:</b>  | GZMB; Granzyme-2; CCPI; CGL1; CSPB; CTLA1; CTSL1; 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 BSA 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.

This antibody is conjugated to BD Horizon™ PE-CF594, which has been developed exclusively by BD Biosciences as a better alternative to PE-Texas Red®. PE-CF594 excites and emits at similar wavelengths to PE-Texas Red® yet exhibits improved brightness and spectral characteristics. Due to PE having maximal absorption peaks at 496 nm and 564 nm, PE-CF594 can be excited by the blue (488-nm), green (532-nm) and yellow-green (561-nm) lasers and can be detected with the same filter set as PE-Texas Red® (eg 610/20-nm filter).



**Multicolor 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 FITC Mouse Anti-Human CD8 (Cat. No. 555366/561947/561948) and either BD Horizon™ PE-CF594 Mouse IgG1 Isotype Control (Cat. No. 562292; Left Panel) or BD Horizon™ PE-CF594 Mouse Anti-Human Granzyme B antibody (Cat. No. 562462; Right Panel). Two-color flow cytometric dot plots showing the correlated expression patterns of Granzyme B (or Mouse IgG1 Isotype Control staining) versus CD8 were derived from gated events with the forward and side light-scatter characteristics of intact 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™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594 were removed.

## Application Notes

### Application

Intracellular staining (flow cytometry)

Routinely Tested

## Suggested Companion Products

| Catalog Number | Name                                          | Size      | Clone  |
|----------------|-----------------------------------------------|-----------|--------|
| 562292         | PE-CF594 Mouse IgG1, $\kappa$ Isotype Control | 0.1 mg    | X40    |
| 555366         | FITC Mouse Anti-Human CD8                     | 100 tests | RPA-T8 |
| 561947         | FITC Mouse Anti-Human CD8                     | 25 tests  | RPA-T8 |
| 561948         | FITC Mouse Anti-Human CD8                     | 500 tests | RPA-T8 |
| 554655         | Fixation Buffer                               | 100 ml    | (none) |
| 554723         | Perm/Wash Buffer                              | 100 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- $\mu$ l experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.
5. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
8. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
9. CF™ is a trademark of Biotium, Inc.
10. When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser.
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12. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which may directly excite both PE and CF™594.

## References

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