

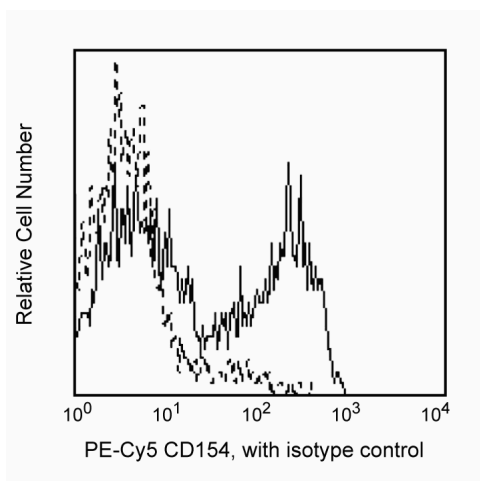
## Technical Data Sheet

**PE-Cy™5 Mouse Anti-Human CD154****Product Information**

|                         |  |
|-------------------------|--|
| <b>Material Number:</b> | 561722   |
| <b>Alternate Name:</b>  | CD40L  |
| <b>Size:</b>            | 25 tests   |
| <b>Vol. per Test:</b>   | 20 µl  |
| <b>Clone:</b>           | TRAP1  |
| <b>Isotype:</b>         | Mouse IgG1, κ  |
| <b>Reactivity:</b>      | QC Testing: Human<br>Tested in Development: Baboon, Rhesus, Cynomolgus |
| <b>Workshop:</b>        | VI 6T-068  |
| <b>Storage Buffer:</b>  | Aqueous buffered solution containing BSA and ≤0.09% sodium azide.      |

**Description**

Reacts with CD40 ligand (CD40L), a 39 kDa type II membrane glycoprotein expressed on activated T cells. CD40-CD40L interaction plays a very important role in T cell-dependent B-cell proliferation, differentiation, and memory cell formation. Anti-CD40L mAb partially blocks T cell-B cell interaction affecting subsequent proliferation, differentiation, and memory cell formation. Anti-CD40L mAb partially blocks T cell-B cell interaction affecting subsequent proliferation, IL-2R expression and differentiation of B cells. In addition, blocking of CD40-CD40L interaction has been demonstrated with soluble CD40, resulting in the inhibition of immunoglobulin isotype switching. It has been reported that patients with X-linked hyper-IgM syndrome have defective expression of functional CD40L due to a defective gene that encodes CD40L.



*Profile of TPA + Ca++ Ionophore-stimulated PBMC  
analyzed on a BD FACScan™ (BDIS, San Jose, CA)*

**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 PE-Cy5 (formerly known as BD Cy-Chrome™) under optimum conditions, and unconjugated antibody and free PE-Cy5 were removed.

**Application Notes****Application**

|                |                  |
|----------------|------------------|
| Flow cytometry | Routinely Tested |
|----------------|------------------|

**Suggested Companion Products**

| Catalog Number | Name                                 | Size      | Clone   |
|----------------|--------------------------------------|-----------|---------|
| 555750         | PE-Cy™5 Mouse IgG1 κ Isotype Control | 100 tests | MOPC-21 |
| 554656         | Stain Buffer (FBS)                   | 500 ml    | (none)  |

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## 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. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
4. PE-Cy5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the PE-Cy5 tandem fluorochrome, extra care must be taken when using dual-laser cytometers which may directly excite both PE and Cy5™.
5. PE-Cy5 is a tandem fluorochrome composed of R-phycoerythrin (PE), which is excited by the 488 nm light of an Argon ion laser and serves as an energy donor, coupled to the cyanine dye Cy5, which acts as an energy acceptor and fluoresces at 670 nm. BD Biosciences Pharmingen has maximized the fluorochrome energy transfer in PE-Cy5, thus maximizing its fluorescence emission intensity, minimizing residual emission from PE, and minimizing lot-to-lot variation.
6. Cy is a trademark of Amersham Biosciences Limited. This conjugated product is sold under license to the following patents: US Patent Nos. 5,486,616; 5,569,587; 5,569,766; 5,627,027.
7. This product is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp. This product is licensed for sale only for research. It is not licensed for any other use. If you require a commercial license to use this product and do not have one return this material, unopened to BD Biosciences, 10975 Torreyana Rd, San Diego, CA 92121 and any money paid for the material will be refunded.
8. PE-Cy5 tandem fluorochromes have been reported to bind some classes of human macrophages and granulocytes via Fc receptors, and PE has been reported to bind to mouse B lymphocytes via Fc receptors. Preincubation of mouse leukocytes with Mouse BD Fc Block™ purified anti-mouse CD16/CD32 mAb 2.4G2 can reduce the non-specific binding of PE-Cy5-conjugated reagents to mouse B cells. However, PE-Cy5 conjugated reagents should not be used to stain splenocytes of SJL, NOD, and MRL mice as B lymphocytes and/or other leukocytes have been reported to non-specifically stain regardless of the use of Mouse BD Fc Block™ (the CD72c complex has been implicated for PE-Cy5 binding in these strains). Reagents conjugated to PE, PerCP, PerCP-Cy5.5, APC, and APC-Cy7 tandem fluorochrome can be used on leukocytes from these mouse strains.
9. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
10. 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.
11. 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.
12. An isotype control should be used at the same concentration as the antibody of interest.

## References

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