# CD154 (CD40 Ligand) Monoclonal Antibody (MR1), PerCP-eFluor™ 710, eBioscience™

| Product Details | |
|---|---|
| Size | 100 µg |
| Species Reactivity | Mouse |
| Published Species | Mouse |
| Host/Isotype | Armenian hamster / IgG |
| Recommended Isotype Control | Armenian Hamster IgG Isotype Control (eBio299Arm), PerCP-eFluor™ 710, eBioscience™ |
| Class | Monoclonal |
| Type | Antibody |
| Clone | MR1 |
| Conjugate | PerCP-eFluor™ 710 |
| Excitation/Emission Max | 482/708 nm |
| Form | Liquid |
| Concentration | 0.2 mg/mL |
| Purification | Affinity chromatography |
| Storage buffer | PBS, pH 7.2 |
| Contains | 0.09% sodium azide |
| Storage conditions | 4° C, store in dark, DO NOT FREEZE! |
| RRID | AB_10597131 |

| Applications | Tested Dilution | Publications |
|---|---|---|
| Flow Cytometry (Flow) | 0.125 µg/test | 4 Publications |

## Product Specific Information

Description: The MR1 monoclonal antibody reacts with mouse CD154, a 39 kDa transmembrane glycoprotein also known as CD40 ligand (CD40L). CD154 is expressed transiently by activated T cells. Through its binding to CD40 on antigen presenting cells (APC) including B cells, monocytes/macrophages, and dendritic cells, it serves a crucial function in T cell-APC cognate interaction. CD154-interaction with CD40 transduces signals for T-dependent B cell activation and induces B cells to enter the cell cycle.

For staining for flow cytometric analysis, it is important to stimulate enriched T cells or enriched CD4 cells (using depletion strategy) prior to staining with MR1.

Applications Reported: This MR1 antibody has been reported for use in flow cytometric analysis.

Applications Tested: This MR1 antibody has been tested by flow cytometric analysis of stimulated mouse splenocytes. This can be used at less than or equal to 0.125 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

PerCP-eFluor® 710 emits at 710 nm and is excited with the blue laser (488 nm); it can be used in place of PerCP-Cyanine5.5. We recommend using a 710/50 bandpass filter, however, the 695/40 bandpass filter is an acceptable alternative. Please make sure that your instrument is capable of detecting this fluorochrome.

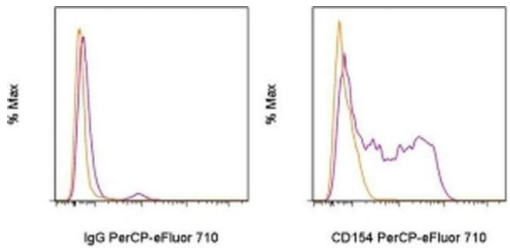
Light sensitivity: This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 µL of cell sample + 100 µL of IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency /compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

Excitation: 488 nm; Emission: 710 nm; Laser: Blue Laser.

Filtration: 0.2 µm post-manufacturing filtered.

## Product Images For CD154 (CD40 Ligand) Monoclonal Antibody (MR1), PerCP-eFluor™ 710, eBioscience™




**CD154 (CD40 Ligand) Antibody (46-1541-82) in Flow**
T cells sorted from BALB/c splenocytes using the MagniSort™ Mouse T cell Enrichment Kit (Product # 8804-6820-74) were unstimulated (orange histogram) or stimulated with the Cell Stimulation Cocktail (Product # 00-4970-03) (purple histogram) and stained with 0.06 µg of Armenian Hamster IgG Isotype Control PerCP-eFluor® 710 (Product # 46-4888-82) (left) or 0.06 µg of Anti-Mouse CD154 (CD40 Ligand) PerCP-eFluor® 710 (right). Cells in the lymphocyte gate were used for analysis.

### View more figures on thermofisher.com

## 4 References

### Flow Cytometry (4)

**Nature immunology**

#### Strength of tonic T cell receptor signaling instructs T follicular helper cell-fate decisions.

"Published figure using CD154 (CD40 Ligand) monoclonal antibody (Product # 46-1541-82) in Flow Cytometry"

Authors: Bartleson JM,Viehmann Milam AA,Donermeyer DL,Horvath S,Xia Y,Egawa T,Allen PM

**Year**
2020

**NPJ vaccines**

#### Reprogramming the adjuvant properties of aluminum oxyhydroxide with nanoparticle technology.

"46-1541 was used in Flow cytometry/Cell sorting to determine whether the particle size and aggregated state of aluminum oxyhydroxide affects its adjuvant activity."

Authors: Orr MT,Khandhar AP,Seydoux E,Liang H,Gage E,Mikasa T,Beebe EL,Rintala ND,Persson KH,Ahniyaz A, Carter D,Reed SG,Fox CB

**Year**
2020

**Species**
Mouse

**Dilution**
1:200

View more Flow references on thermofisher.com