

# 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<sup>5</sup> to 10<sup>8</sup> 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.

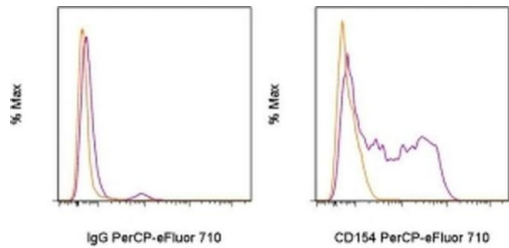
Light sensitivity: This tandem dye is sensitive to photo-induced oxidation. Please protect this vial and stained samples from light.

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.

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4 References

Flow Cytometry (4)

<p>Nature immunology</p> <p><b>Strength of tonic T cell receptor signaling instructs T follicular helper cell-fate decisions.</b></p> <p>"Published figure using CD154 (CD40 Ligand) monoclonal antibody (Product # 46-1541-82) in Flow Cytometry"</p> <p>Authors: Bartleson JM,Viehmann Milam AA,Donermeyer DL,Horvath S,Xia Y,Egawa T,Allen PM</p>	<p>Year</p> <p>2020</p>
<p>NPJ vaccines</p> <p><b>Reprogramming the adjuvant properties of aluminum oxyhydroxide with nanoparticle technology.</b></p> <p>"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."</p> <p>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</p>	<p>Year</p> <p>2020</p> <p>Species</p> <p>Mouse</p> <p>Dilution</p> <p>1:200</p>

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