

CD154 (CD40 Ligand) Monoclonal Antibody (MR1), Functional Grade, 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), Functional Grade, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	MR1
Conjugate	Functional Grade
Form	Liquid
Concentration	1 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	no preservative
Storage conditions	4° C
RRID	AB_469085

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.5 µg/test	11 Publications
Neutralization (Neu)	Assay-Dependent	1 Publication
Functional Assay (FN)	Assay-Dependent	2 Publications
Inhibition Assays (IA)	-	1 Publication

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: The MR1 antibody has been reported for use in flow cytometric analysis. It has also been reported to inhibit binding of CD154 to CD40 and activation of B cells.

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 0.5 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 10⁵ to 10⁸ cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Storage and handling: Use in a sterile environment.

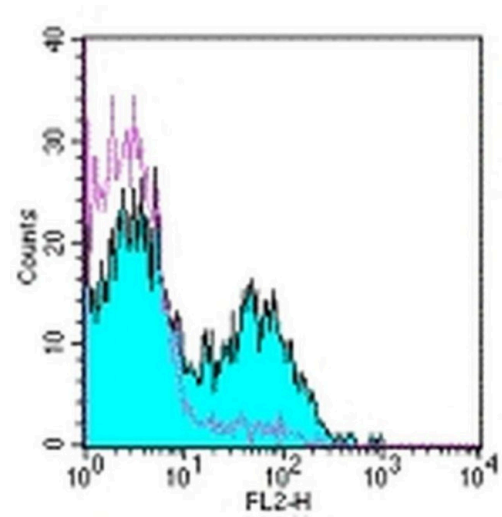
Filtration: 0.2 µm post-manufacturing filtered.

Purity: Greater than 90%, as determined by SDS-PAGE.

Endotoxin Level: Less than 0.001 ng/µg antibody, as determined by LAL assay.

Aggregation: Less than 10%, as determined by HPLC.

Product Images For CD154 (CD40 Ligand) Monoclonal Antibody (MR1), Functional Grade, eBioscience™



CD154 (CD40 Ligand) Antibody (16-1541-82) in Flow
Staining of 6-hour, PMA/Ionomycin-stimulated T cells from BALB/c spleen with 0.25 µg of Armenian Hamster IgG Isotype Control Functional Grade Purified (Product # 16-4888-81) (open histogram) or 0.25 µg of Anti-Mouse CD154 Functional Grade Purified (right) followed by Anti-Armenian Hamster IgG Biotin (Product # 13-4113-85) and Streptavidin PE (Product # 12-4317-87). Total viable cells were used for analysis.

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Flow Cytometry (11)

<p>Nature immunology</p> <p>Strength of tonic T cell receptor signaling instructs T follicular helper cell-fate decisions.</p> <p>"Published figure using CD154 (CD40 Ligand) monoclonal antibody (Product # 16-1541-82) 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>Reprogramming the adjuvant properties of aluminum oxyhydroxide with nanoparticle technology.</p> <p>"Published figure using CD154 (CD40 Ligand) monoclonal antibody (Product # 16-1541-82) in Flow Cytometry"</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>

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Neutralization (1)

<p>Blood</p> <p>Preventing restimulation of memory B cells in hemophilia A: a potential new strategy for the treatment of antibody-dependent immune disorders.</p> <p>"16-1541 was used in Blocking experiments to study the requirements for the restimulation of FVIII-specific memory B cells and their differentiation into anti-FVIII antibody-producing cells."</p> <p>Authors: Hausl C,Ahmad RU,Schwarz HP,Muchitsch EM,Turecek PL,Dorner F,Reipert BM</p>	<p>Year</p> <p>2004</p> <p>Species</p> <p>Mouse</p>
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Functional Assay (2)

<p>The Journal of investigative dermatology</p> <p>Natural killer T cells are essential for the development of contact hypersensitivity in BALB/c mice.</p> <p>"16-1541 was used in Flow cytometry/Cell sorting to report the pivotal contribution of dendritic and natural killer T cell interactions to hypersensitivity."</p> <p>Authors: Shimizuhira C,Otsuka A,Honda T,Kitoh A,Egawa G,Nakajima S,Nakashima C,Watarai H,Miyachi Y,Kabashima K</p>	<p>Year</p> <p>2014</p> <p>Species</p> <p>Mouse</p>
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More applications with references on thermofisher.com

IA (1)

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