

## PE anti-mouse CD154 Antibody

<b>Catalog# / Size</b>	106505 / 50 µg 106506 / 200 µg
<b>Clone</b>	MR1
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	CD40 ligand (CD40L), gp39, T-BAM, TRAP, Ly-62, TNFSF5
<b>Isotype</b>	Armenian Hamster IgG
<b>Description</b>	CD154 is a 39 kD TNF superfamily member also known as CD40 ligand, gp39, T-BAM, TRAP, and Ly-62. CD154 is an accessory molecule expressed predominantly on activated CD4 <sup>+</sup> lymphocytes that bind CD40. CD154 plays an important role in T-B cell costimulation. The MR1 antibody has been reported to inhibit the activation of T and B lymphocytes <i>in vitro</i> and antigen-specific lymphocyte responses <i>in vivo</i> .

### Product Details

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<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Armenian Hamster
<b>Immunogen</b>	Activated mouse Th1 clone D1.6
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions.
<b>Concentration</b>	0.2 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is ≤ 0.25 µg per 10 <sup>6</sup> cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: immunohistochemical staining <sup>1,2</sup> of acetone-fixed frozen sections, and <i>in vitro</i> and <i>in vivo</i> blocking of ligand binding <sup>3-5</sup> . For most successful immunofluorescent staining results, it may be important to maximize signal over background by using a relatively bright fluorochrome-antibody conjugate (Cat. No. 106506) or by using a high sensitivity, three-layer staining technique (e.g., including a biotinylated antibody (Cat. No. 106504) or biotinylated anti-Armenian hamster IgG (Cat. No. 405501) second step, followed by SAV-PE (Cat. No. 405204). The Ultra-LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. Nos. 106515-106520).
<b>Application References</b>	<ol style="list-style-type: none"> <li>Lettesjö H, <i>et al.</i> 2000. <i>J. Immunol.</i> 165:4095. (IHC)</li> <li>Dunn RJ, <i>et al.</i> 1997. <i>J. Histochem. Cytochem.</i> 45:129. (IHC)</li> <li>Noelle RJ, <i>et al.</i> 1992. <i>P. Natl. Acad. Sci. USA</i> 89:6550. (Block)</li> <li>Roy M, <i>et al.</i> 1995. <i>Eur. J. Immunol.</i> 25:596. (Block)</li> <li>Foy TM, <i>et al.</i> 1994. <i>J. Exp. Med.</i> 180:157. (Block)</li> <li>Lawson BR, <i>et al.</i> 2007. <i>J. Immunol.</i> 178:5366.</li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	
<b>Product Citations</b>	<ol style="list-style-type: none"> <li>Xie A <i>et al.</i> 2017. <i>Endocrinology.</i> 158(10):3140-3151 . <a href="#">PubMed</a></li> </ol>

2. Sasaki K, *et al.* 2019. Nat Commun. 10:3878. [PubMed](#)
3. Li H, *et al.* 2021. Nat Commun. 12:2773. [PubMed](#)
4. Gengenbacher M, *et al.* 2014. MBio. 5:1262. [PubMed](#)
5. Mintz MA, *et al.* 2019. Immunity. 51:310. [PubMed](#)
6. Hu Q, *et al.* 2018. Nat Biomed Eng. 0.660416667. [PubMed](#)
7. Danelli L, *et al.* 2015. Cancer Immunol Res. 3:85. [PubMed](#)
8. Lu X, *et al.* 2015. J Immunol. 194:2011. [PubMed](#)
9. Trefzer A, *et al.* 2021. Cell Reports. 34(6):108748. [PubMed](#)
10. Frost JN, *et al.* 2021. Med (N Y). 2:164. [PubMed](#)
11. Iwata H, *et al.* 2013. J Immunol. 191:2978. [PubMed](#)
12. Chen C, *et al.* 2011. PLoS One. 6:e17712. [PubMed](#)
13. Kimura S, *et al.* 2020. Am J Transplant. 20:977. [PubMed](#)
14. Han P, *et al.* 2020. Sci Adv. 6:eaaaz1580. [PubMed](#)
15. Toriyama K, *et al.* 2020. Commun Biol. 0.398611111. [PubMed](#)

**RRID** AB\_313270 (BioLegend Cat. No. 106505)  
 AB\_313271 (BioLegend Cat. No. 106506)

## Antigen Details

<b>Structure</b>	TNF superfamily, 39 kD
<b>Distribution</b>	Activated CD4 <sup>+</sup> T cells
<b>Function</b>	T-B cell costimulation
<b>Ligand/Receptor</b>	CD40
<b>Cell Type</b>	T cells, Tregs
<b>Biology Area</b>	Costimulatory Molecules, Immunology
<b>Molecular Family</b>	Adhesion Molecules, CD Molecules

**Antigen References**

1. Barclay A, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
2. Noelle RJ, *et al.* 1992. *P. Natl. Acad. Sci. USA* 89:6550.
3. Bancherou J, *et al.* 1994. *Annu. Rev. Immunol.* 12:881.
4. Clark EA, *et al.* 1996. *P. Natl. Acad. Sci. USA* 83:4494.

**Gene ID** [21947](#)

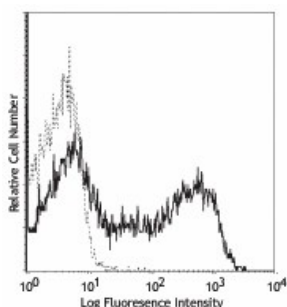
## Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

Biotin anti-mouse CD154, PE anti-mouse CD154, APC anti-mouse CD154, PE/Cyanine7 anti-mouse CD154, PerCP/Cyanine5.5 anti-mouse CD154, Ultra-LEAF™ Purified anti-mouse CD154

## Product Data



PMA- and ionomycin-stimulated (6 hrs)  
 BALB/c T cells stained with MR1 PE

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