

## Alexa Fluor® 647 anti-human CD154 Antibody

<b>Catalog# / Size</b>	310818 / 100 tests
<b>Clone</b>	24-31
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	CD40L, gp39, TRAP, T-BAM, TNFSF5
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	CD154 (CD40 ligand) is also known as CD40L, gp39, TRAP and T-BAM. CD40 ligand is a 32-39 kD type II transmembrane glycoprotein. It is a member of the TNF superfamily and is expressed on activated T cells. It has been reported to be important for B cell costimulation following binding of its receptor, CD40. Additionally, binding of CD40L to CD40 on B cells promotes the secretion of immunoglobulin and Ig isotype switching. CD40L is also involved in the regulation of cytokine production by T cells.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Cynomolgus, Rhesus
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 647 under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<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 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.  * Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm.  Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.  <a href="#">View full statement regarding label licenses</a>
<b>Excitation Laser</b>	Red Laser (633 nm)
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: immunofluorescence microscopy <sup>1,3</sup> and blocking of T cell-dependent B cell differentiation <sup>1,2,4,5</sup> . The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 310812). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 310828) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).

### Application References

1. Brams P, *et al.* 2001. *Int. Immunopharmacol.* 1:277. (Block, IF)
2. Rushworth SA, *et al.* 2002. *Transplantation* 73:635. (Block)
3. Berner B, *et al.* 2000. *Ann. Rheum. Dis.* 59:190. (IF)
4. Nordström T, *et al.* 2006. *J. Leukocyte Biol.* 79:319. (Block)
5. Zhang AL, *et al.* 2007. *Blood* doi:10.1182/blood-2007-02-076364. (Block) [PubMed](#)
6. Kuchen S, *et al.* 2007. *J. Immunol.* 179:5886.

7. Matus-Nicodermos R, *et al.* 2011. *J. Immunol.* 186:2164. [PubMed](#)
8. Peterson VM, *et al.* 2017. *Nat. Biotechnol.* 35:936. (PG)

#### Product Citations

1. Thieme CJ, *et al.* 2020. *Cell Rep Med.* 1:100092. [PubMed](#)
2. Yin S, *et al.* 2015. *Sci Rep.* 5: 14432. [PubMed](#)

**RRID** AB\_492970 (BioLegend Cat. No. 310818)

### Antigen Details

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<b>Structure</b>	TNF superfamily, type II transmembrane glycoprotein, cleaved as soluble CD40L, 32-39 kD
<b>Distribution</b>	Activated T cells
<b>Function</b>	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>	CD Molecules
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Najafian N, <i>et al.</i> 2003. <i>Expert Opin. Biol. Ther.</i> 3:227.</li><li>2. Racke M, <i>et al.</i> 2002. <i>Expert Opin. Ther. Targets.</i> 6:275.</li><li>3. Ford G, <i>et al.</i> 1999. <i>J. Immunol.</i> 162:4037.</li></ol>
<b>Gene ID</b>	<a href="#">959</a>

### Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

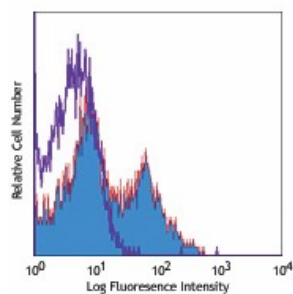
### Other Formats

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Purified anti-human CD154, FITC anti-human CD154, PE anti-human CD154, PE/Cyanine5 anti-human CD154, APC anti-human CD154, Biotin anti-human CD154, Alexa Fluor® 488 anti-human CD154, Alexa Fluor® 647 anti-human CD154, Pacific Blue™ anti-human CD154, Brilliant Violet 785™ anti-human CD154, APC/Cyanine7 anti-human CD154, Brilliant Violet 421™ anti-human CD154, Brilliant Violet 605™ anti-human CD154, Ultra-LEAF™ Purified anti-human CD154, Brilliant Violet 510™ anti-human CD154, PE/Cyanine7 anti-human CD154, PerCP/Cyanine5.5 anti-human CD154, Brilliant Violet 711™ anti-human CD154, Purified anti-human CD154 (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD154, TotalSeq™-A0032 anti-human CD154, Alexa Fluor® 700 anti-human CD154, APC/Fire™ 750 anti-human CD154, TotalSeq™-C0032 anti-human CD154, TotalSeq™-B0032 anti-human CD154, TotalSeq™-D0032 anti-human CD154

### Product Data

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TPA+ ionomycin-stimulated human PBMCs (5 hours) stained with 24-31 Alexa Fluor® 647

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