

## Ultra-LEAF™ Purified anti-human CD154 Antibody

<b>Catalog# / Size</b>	310827 / 100 µg 310828 / 1 mg
<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

<b>Reactivity</b>	Human, <b>Cross-Reactivity:</b> Cynomolgus, Rhesus
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is <0.01 EU/µg of the protein (<0.001 ng/µg of the protein) as determined by the LAL test.
<b>Preparation</b>	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.
<b>Concentration</b>	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL. Older lots may have also been bottled at 1 mg/mL. 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. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
<b>Application</b>	<a href="#">FC - Quality tested</a> <a href="#">Block, ICC - Reported in the literature, not verified in house</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 ≤ 2.0 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.
<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).
<b>Application References</b>	<ol style="list-style-type: none"> <li>1. Brams P, <i>et al.</i> 2001. <i>Int. Immunopharmacol.</i> 1:277. (Block, IF)</li> <li>2. Rushworth SA, <i>et al.</i> 2002. <i>Transplantation</i> 73:635. (Block)</li> <li>3. Berner B, <i>et al.</i> 2000. <i>Ann. Rheum. Dis.</i> 59:190. (IF)</li> <li>4. Nordström T, <i>et al.</i> 2006. <i>J. Leukocyte Biol.</i> 79:319. (Block)</li> <li>5. Zhang AL, <i>et al.</i> 2007. <i>Blood</i> doi:10.1182/blood-2007-02-076364. (Block) <a href="#">PubMed</a></li> <li>6. Kuchen S, <i>et al.</i> 2007. <i>J. Immunol.</i> 179:5886.</li> <li>7. Matus-Nicodermos R, <i>et al.</i> 2011. <i>J. Immunol.</i> 186:2164. <a href="#">PubMed</a></li> <li>8. Peterson VM, <i>et al.</i> 2017. <i>Nat. Biotechnol.</i> 35:936. (PG)</li> </ol>
<b>RRID</b>	AB_11150400 (BioLegend Cat. No. 310827) AB_11150401 (BioLegend Cat. No. 310828)

(PubMed link indicates BioLegend citation)

## 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>	1. Najafian N, <i>et al.</i> 2003. <i>Expert Opin. Biol. Ther.</i> 3:227. 2. Racke M, <i>et al.</i> 2002. <i>Expert Opin. Ther. Targets.</i> 6:275. 3. Ford G, <i>et al.</i> 1999. <i>J. Immunol.</i> 162:4037.
<b>Gene ID</b>	<a href="#">959</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

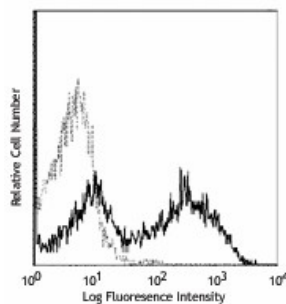
## Other Formats

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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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PMA+ionomycin-stimulated human PBMCs (6 hours) stained with CD154 (clone 24-31) PE

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