

Brilliant Violet 650™ anti-human CD154 (CD40L) Antibody

Catalog# / Size	310863 / 25 tests 310864 / 100 tests
Clone	24-31
Regulatory Status	RUO
Other Names	CD40L, gp39, TRAP, T-BAM, TNFSF5
Isotype	Mouse IgG1, κ
Description	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

Verified Reactivity	Human
Reported Reactivity	Cynomolgus, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 650™ under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. 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. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>Brilliant Violet 650™ excites at 405 nm and emits at 645 nm. The bandpass filter 660/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel. Refer to your instrument manual or manufacturer for support. Brilliant Violet 650™ is a trademark of Sirigen Group Ltd.</p> <p>Learn more about Brilliant Violet™.</p> <p>This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.</p>
Excitation Laser	Violet Laser (405 nm)

Application Notes Additional reported applications (for the relevant formats) include: immunofluorescence microscopy^{1,3} and blocking of T cell-dependent B cell differentiation^{1,2,4,5}. 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

(PubMed link indicates BioLegend citation)

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)

RRID AB_3675039 (BioLegend Cat. No. 310863)
AB_3675039 (BioLegend Cat. No. 310864)

Antigen Details

Structure	TNF superfamily, type II transmembrane glycoprotein, cleaved as soluble CD40L, 32-39 kD
Distribution	Activated T cells
Function	B cell costimulation
Ligand/Receptor	CD40
Cell Type	T cells, Tregs
Biology Area	Costimulatory Molecules, Immunology
Molecular Family	CD Molecules
Antigen References	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.
Gene ID	959

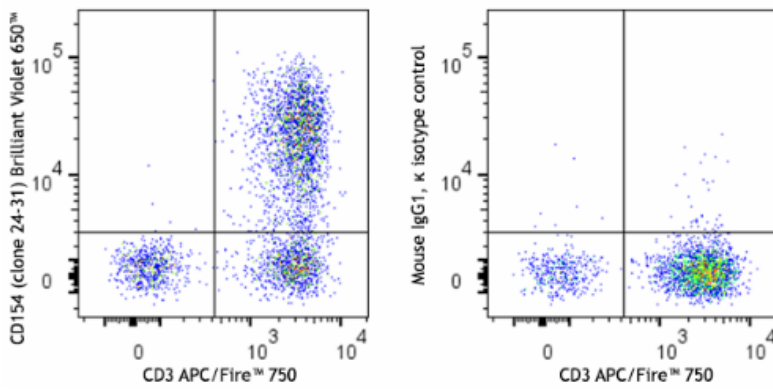
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-human CD154 (CD40L) Antibody, FITC anti-human CD154 (CD40L) Antibody, PE anti-human CD154 (CD40L) Antibody, PE/Cyanine5 anti-human CD154 (CD40L) Antibody, APC anti-human CD154 (CD40L) Antibody, Biotin anti-human CD154 (CD40L) Antibody, Alexa Fluor® 488 anti-human CD154 (CD40L) Antibody, Alexa Fluor® 647 anti-human CD154 (CD40L), Pacific Blue™ anti-human CD154 (CD40L) Antibody, Brilliant Violet 785™ anti-human CD154 (CD40L) Antibody, APC/Cyanine7 anti-human CD154 (CD40L) Antibody, Brilliant Violet 421™ anti-human CD154 (CD40L) Antibody, Brilliant Violet 605™ anti-human CD154 (CD40L) Antibody, Ultra-LEAF™ Purified anti-human CD154 (CD40L), Brilliant Violet 510™ anti-human CD154 (CD40L) Antibody, PE/Cyanine7 anti-human CD154 (CD40L) Antibody, PerCP/Cyanine5.5 anti-human CD154 (CD40L) Antibody, Brilliant Violet 711™ anti-human CD154 (CD40L) Antibody, Purified anti-human CD154 (CD40L) (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD154 (CD40L) Antibody, TotalSeq™-A0032 anti-human CD154 (CD40L) Antibody, Alexa Fluor® 700 anti-human CD154 (CD40L), APC/Fire™ 750 anti-human CD154 (CD40L), TotalSeq™-C0032 anti-human CD154 (CD40L) Antibody, TotalSeq™-B0032 anti-human CD154 (CD40L) Antibody, TotalSeq™-D0032 anti-human CD154 (CD40L) Antibody, PE/Fire™ 640 anti-human CD154 (CD40L), PE/Fire™ 810 anti-human CD154 (CD40L), PerCP/Fire™ 780 anti-human CD154 (CD40L), PE/Fire™ 700 anti-human CD154 (CD40L), Spark Red™ 718 anti-human CD154 (CD40L) (Flexi-Fluor™) Antibody, Brilliant Violet 650™ anti-human CD154 (CD40L) Antibody, PerCP/Fire™ 806 anti-human CD154 (CD40L) Antibody, Spark Blue™ 574 anti-human CD154 (CD40L) (Flexi-Fluor™) Antibody, Spark Blue™ 550 anti-human CD154 (CD40L) (Flexi-Fluor™) Antibody, PE/Cyanine7 anti-human CD154

Product Data



Human peripheral blood mononuclear cells were stimulated with Cell Activation Cocktail (without Brefeldin A) (Cat. No. 423301) for 6 hours. Cells were then stained with anti-human CD3 (clone UCHT1) APC/Fire™ 750 and anti-human CD154 (clone 24-31) Brilliant Violet 650™ or mouse IgG1, κ Brilliant Violet 650™ isotype control. Data shown is gated on the lymphocyte population.

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