Brilliant Violet 421™ anti-mouse CD152 Antibody

Catalog# / Size	106311 / 125 µL 106312 / 50 µg
Clone	UC10-4B9
Regulatory Status	RUO
Other Names	Cytotoxic T Lymphocyte-Associated Antigen-4 (CTLA-4), Ly-56
Isotype	Armenian Hamster IgG
Description	CD152, also known as CTLA-4 or Ly-56, is a 33 kD member of the immunoglobulin superfamily. It is expressed on activated T and B lymphocytes. CD152 is similar to CD28 in amino acid sequence, structure, and genomic organization and these two receptors share common B7 family counter-receptors (B7-1, B7-2). Whereas CD28 delivers a costimulatory signal in T cell activation, CTLA-4 negatively regulates cell-mediated immune responses. CD152 is thought to play a role in the induction and maintenance of immunological tolerance as well as the development of protective immunity and thymocyte regulation.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Armenian Hamster
Immunogen	Mouse CTLA-4-mouse IgG2a fusion protein
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 421™ under optimal conditions.
Concentration	µg sizes: 0.2 mg/mL µL sizes: lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
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	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining using the µg size, the suggested use of this reagent is ≤1.0 µg per million cells in 100 µl volume. For immunofluorescent staining using the µl size, 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. Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd. Learn more about Brilliant Violet™. 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.
Excitation Laser	Violet Laser (405 nm)
Application Notes	The UC10-4B9 antibody can enhance T cell co-stimulation by blocking CTLA-4 interactions with the B7 co-receptors, favoring CD28 interactions. Additional reported applications (for the relevant

formats) include: immunoprecipitation[1], *in vitro* stimulation, *in vitro* and *in vivo* blocking[1-4] of ligand binding, and as ELISA capture antibody[5]. To reduce non-specific binding to cells bearing Fc-receptors, pre-incubation of cells with anti-mouse CD16/CD32, clone 93 (Cat. No. 101301/101302), is recommended prior to immunofluorescent staining. 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. 106306) or by using a high sensitivity, three-layer staining technique (e.g., including a biotinylated anti-Armenian hamster IgG (Cat. No. 405501) second step, followed by SAv-PE (Cat. No. 405204)). The Ultra LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 106327).

Application References

(PubMed link indicates BioLegend citation)

1. Walunas TL, *et al.* 1994. *Immunity* 1:405. (Block, IP)
2. Cilio CM, *et al.* 1998. *J. Exp. Med.* 188:1239. (Block)
3. Issazadeh S, *et al.* 1999. *J. Immunol.* 162:761. (Block)
4. McCoy K, *et al.* 1997. *J. Exp. Med.* 186:183. (Block)
5. Hsu HC, *et al.* 2007. *J. Immunol.* 178:5357. (ELISA Capture)
6. Sugita S, *et al.* 2010. *Invest. Ophthalmol. Vis. Sci.* 51:5783. PubMed

Product Citations

1. Nagai Y, *et al.* 2019. Front Immunol. 10:174. PubMed
2. Su W, *et al.* 2020. Cell Metabolism. 32(6):996-1011.e7. PubMed
3. Mirando AC, *et al.* 2020. Oncoimmunology. 9:1760685. PubMed
4. Kurniawan H, *et al.* 2020. Cell Metabolism. 31(5):920-936. PubMed
5. Singh M, *et al.* 2017. Nat Commun. 8:1447. PubMed
6. Wei C, *et al.* 2016. Cell Death Dis. 7:e2489. PubMed
7. Pasciuto E, *et al.* 2020. Cell. 182:625. PubMed
8. Tian M, *et al.* 2021. Elife. 10:. PubMed
9. Hekim C, *et al.* 2017. Cancer Immunol Res. 5:157. PubMed
10. Mondini M, *et al.* 2015. Mol Cancer Ther. 14:1336. PubMed
11. Phadke MS, *et al.* 2021. Cancer Immunol Res. 9:554. PubMed

RRID

AB_10901170 (BioLegend Cat. No. 106311)
AB_2563063 (BioLegend Cat. No. 106312)

Antigen Details

Structure	Ig superfamily, 33 kD
Distribution	Activated T cells and B cells
Function	Negative regulator of T cell activation
Ligand/Receptor	CD80 (B7-1), CD86 (B7-2)
Cell Type	B cells, T cells, Tregs
Biology Area	Immunology
Molecular Family	CD Molecules, Immune Checkpoint Receptors

Antigen References

1. Barclay A, *et al.* 1997. The Leukocyte Antigen FactsBook Academic Press.
2. Allison JP, *et al.* 1995. *Science* 270:932.
3. Waterhouse P, *et al.* 1995. *Science* 270:985.
4. Linsley PS, *et al.* 1991. *J. Exp. Med.* 174:561.

Gene ID 12477

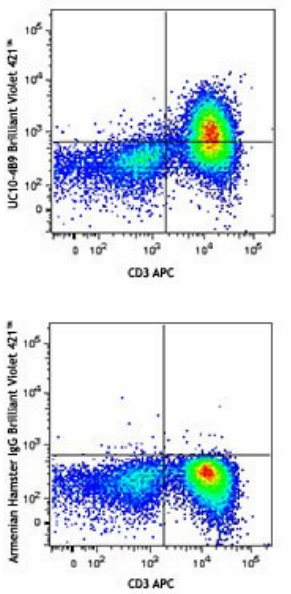
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

Biotin anti-mouse CD152, PE anti-mouse CD152, Purified anti-mouse CD152, APC anti-mouse CD152, Brilliant Violet 421™ anti-mouse CD152, PE/Cyanine7 anti-mouse CD152, PerCP/Cyanine5.5 anti-mouse CD152, PE/Dazzle™ 594 anti-mouse CD152, Brilliant Violet 605™ anti-mouse CD152, TotalSeq™-A0388 anti-mouse CD152, Ultra-LEAF™ Purified anti-mouse CD152, TotalSeq™-C0388 anti-mouse CD152, TotalSeq™-B0388 anti-mouse CD152

Product Data



Con A+IL-2-stimulated C57BL/6 splenocytes (3 days) were stained with CD3 APC and CD152 (clone UC10-4B9) Brilliant Violet 421™ (top) or Armenian Hamster IgG Brilliant Violet 421™ isotype control (bottom).

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