

Brilliant Violet 421™ anti-mouse CD274 (B7-H1, PD-L1) Antibody

Catalog# / Size	124315 / 125 µL
Clone	10F.9G2
Regulatory Status	RUO
Other Names	B7-H1, PD-L1
Isotype	Rat IgG2b, κ
Description	CD274, also known as B7-H1 or programmed death ligand 1 (PD-L1), is a 40 kD type I transmembrane protein and a member of the B7 family within the immunoglobulin receptor superfamily. It is expressed on T cells, B cells, NK cells, dendritic cells, IFN-γ activated endothelial cells, and monocytes. B7-H1 is one of the ligands of PD-1. The interaction of B7-H1 with PD-1 plays an important role in the inhibition of T cell responses. Other studies have shown that B7-H1 is able to costimulate T cell growth and cytokine production. CD274 is involved in costimulation essential for T cell proliferation and production of IL-10 and IFN-γ, in an IL-2-dependent and a PD-1-independent manner. Its interaction with PD-1 inhibits T cell proliferation and cytokine production.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
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	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	<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 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.</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 ⁴ , blocking ^{6,7,8,9} , and immunohistochemistry of acetone-fixed frozen sections ^{4, 11} . The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 124303). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 124318) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).

Application References

(PubMed link indicates
BioLegend citation)

1. Maier H, *et al.* 2007. *J. Immunol.* 178:2714.
2. Meng Q, *et al.* 2006. *Invest. Ophthalmol. Vis. Sci.* 47:4444. [PubMed](#)
3. Scarlett UK, *et al.* 2012. *J Exp Med.* 209:495. [PubMed](#)
4. Grabie N, *et al.* 2007. *Circulation* 116:2062. (IF, IHC)
5. Paterson AM, *et al.* 2011. *J. Immunol.* 187:1097.
6. Channappanavar R, *et al.* 2012. *PLoS One* 7:e39757. (Block)
7. Schreiber HA, *et al.* 2010. *PLoS One* 5:e11453. (Block) [PubMed](#)
8. Muthumani K, *et al.* 2011. *J. Immunol.* 187:2932. (Block) [PubMed](#)
9. Cripps JG, *et al.* 2010. *Hepatology* 52:1350. (Block) [PubMed](#)
10. Murakami R, *et al.* 2013. *PLoS One.* 8:73270. [PubMed](#)
11. Riella LV, *et al.* 2011. *Am. J. Transplant* 11:832-40. (IHC)
12. Lei GS, *et al.* 2015. *Infect Immun.* 83:572. [PubMed](#)

Product Citations

1. Saha D *et al.* 2017. *Cancer cell.* 32(2):253-267. [PubMed](#)
2. Yao RQ, *et al.* 2022. *Theranostics.* 12:4606. [PubMed](#)
3. Wei H, *et al.* 2021. *Malar J.* 20:89. [PubMed](#)
4. Go DM, *et al.* 2021. *Cell Mol Gastroenterol Hepatol.* 12:715. [PubMed](#)
5. Best SA, *et al.* 2018. *Cell Metab.* 27:935. [PubMed](#)
6. Hsu JM, *et al.* 2018. *Nat Commun.* 9:1908. [PubMed](#)
7. Stewart JM, *et al.* 2020. *ACS Biomater Sci Eng.* 6:5941. [PubMed](#)
8. Russler-Germain EV, *et al.* 2021. *Elife.* 10:. [PubMed](#)
9. Giesen D, *et al.* 2020. *Clin Cancer Res.* 26:3999. [PubMed](#)
10. Walsh SM, *et al.* 2021. *eLife.* 10:00. [PubMed](#)
11. Puigdelloses M, *et al.* 2021. *J Immunother Cancer.* 9:. [PubMed](#)
12. Mansouri S, *et al.* 2020. *Mucosal Immunol.* 0.954861111. [PubMed](#)
13. Yu D, *et al.* 2019. *Cell Commun Signal.* 0.828472222. [PubMed](#)
14. Jiao S, *et al.* 2017. *Clin Cancer Res.* 23:3711. [PubMed](#)
15. Zhao Y, *et al.* 2020. *Immunity.* 51(6):1059-1073.e9.. [PubMed](#)
16. Ng KW, *et al.* 2019. *eLife.* 0.3333333333333333. [PubMed](#)
17. van der Velden V, *et al.* 2017. *J Immunol Methods.* 10.1016/j.jim.2017.03.011. [PubMed](#)
18. Rosato PC, *et al.* 2019. *Nat Commun.* 10:567. [PubMed](#)
19. Vogel A, *et al.* 2022. *Cell Rep.* 38:110420. [PubMed](#)
20. Bommarreddy PK, *et al.* 2019. *J Biol Methods.* 6:2. [PubMed](#)
21. Sugita Y, *et al.* 2021. *Oncol Rep.* 45:. [PubMed](#)
22. Freed-Pastor WA, *et al.* 2021. *Cancer Cell.* .: [PubMed](#)
23. Srivastava S, *et al.* 2020. *Cancer Cell.* 39(2):193-208.e10. [PubMed](#)
24. O'Reilly LA, *et al.* 2018. *Immunity.* 48:570. [PubMed](#)
25. Lucas ED, *et al.* 2020. *Cell Reports.* 33(2):108258. [PubMed](#)

RRID

AB_10897097 (BioLegend Cat. No. 124315)

Antigen Details

Structure	40 kD type I transmembrane protein member of B7 family within the immunoglobulin receptor superfamily
Distribution	T cells, B cells, NK cells, dendritic cells, IFN- γ activated endothelial cells, and monocytes
Ligand/Receptor	PD-1 (PDCD1)
Cell Type	B cells, Dendritic cells, Endothelial cells, Monocytes, NK cells, T cells
Biology Area	Cancer Biomarkers, Costimulatory Molecules, Immunology
Molecular Family	Adhesion Molecules, CD Molecules, Immune Checkpoint Receptors
Antigen References	<ol style="list-style-type: none">1. Sharpe A, <i>et al.</i> 2007. <i>Nat. Immunol.</i> 8:239.2. Dong H, <i>et al.</i> 1999. <i>Nat. Med.</i> 5:1365.3. Freeman G, <i>et al.</i> 2000. <i>J. Exp. Med.</i> 192:1027.
Gene ID	60533

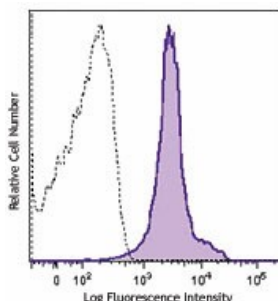
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-mouse CD274 (B7-H1, PD-L1), Biotin anti-mouse CD274 (B7-H1, PD-L1), PE anti-mouse CD274 (B7-H1, PD-L1), Brilliant Violet 421™ anti-mouse CD274 (B7-H1, PD-L1), APC anti-mouse CD274 (B7-H1, PD-L1), PE/Cyanine7 anti-mouse CD274 (B7-H1, PD-L1), Ultra-LEAF™ Purified anti-mouse CD274 (B7-H1, PD-L1), Brilliant Violet 711™ anti-mouse CD274 (B7-H1, PD-L1), Brilliant Violet 605™ anti-mouse CD274 (B7-H1, PD-L1), PE/Dazzle™ 594 anti-mouse CD274 (B7-H1, PD-L1), GolnVivo™ Purified anti-mouse CD274 (B7-H1, PD-L1), Brilliant Violet 785™ anti-mouse CD274 (B7-H1, PD-L1), PerCP/Cyanine5.5 anti-mouse CD274 (B7-H1, PD-L1), Brilliant Violet 650™ anti-mouse CD274 (B7-H1, PD-L1), PE/Cyanine5 anti-mouse CD274 (B7-H1, PD-L1), PE/Fire™ 640 anti-mouse CD274 (B7-H1, PD-L1), Spark Red™ 718 anti-mouse CD274 (B7-H1, PD-L1)

Product Data



C57BL/6 mouse splenocytes were stained with CD274 (clone 10F.9G2) Brilliant Violet 421™ (filled histogram), or rat IgG2b, κ Brilliant Violet 421™ isotype control (open histogram).

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