

Brilliant Violet 650™ anti-human CD279 (PD-1) Antibody

Catalog# / Size	329949 / 25 tests 329950 / 100 tests
Clone	EH12.2H7
Regulatory Status	RUO
Other Names	PD-1
Isotype	Mouse IgG1, κ
Description	Programmed cell death 1 (PD-1), also known as CD279, is a 55 kD member of the immunoglobulin superfamily. CD279 contains the immunoreceptor tyrosine-based inhibitory motif (ITIM) in the cytoplasmic region and plays a key role in peripheral tolerance and autoimmune disease. CD279 is expressed predominantly on activated T cells, B cells, and myeloid cells. PD-L1 (B7-H1) and PD-L2 (B7-DC) are ligands of CD279 (PD-1) and are members of the B7 gene family. Evidence suggests overlapping functions for these two PD-1 ligands and their constitutive expression on some normal tissues and upregulation on activated antigen-presenting cells. Interaction of CD279 ligands results in inhibition of T cell proliferation and cytokine secretion.

Product Details

Verified Reactivity	Human
Reported Reactivity	African Green, Baboon, Chimpanzee, Common Marmoset, Cynomolgus, Rhesus, Squirrel Monkey
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, 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 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.

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.

[Learn more about Brilliant Violet™.](#)

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Excitation Laser	Violet Laser (405 nm)
Application Notes	Additional reported applications (for the relevant formats) include: blocking of ligand binding ¹⁻

³, immunohistochemical staining of paraformaldehyde fixed frozen sections¹³, and spatial biology (IBEX)^{15,16}. The LEAF™ purified antibody (Endotoxin <0.1 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. No. 329911 and 329912). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 329926) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/μg).

Application References

(PubMed link indicates BioLegend citation)

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2. Radziewicz H, *et al.* 2007. *J. Virol.* 81:2545. (FA)
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4. Zahn RC, *et al.* 2008. *J. Virol.* 82:11577. [PubMed](#)
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6. Nakamoto N, *et al.* 2009. *PLoS Pathog.* 5:e1000313. (FA)
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10. Montero P, *et al.* 2011. *J. Immunol.* 186:4618. [PubMed](#)
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16. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

Product Citations

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2. Kilgour MK, *et al.* 2022. *Nat Protoc.* 17:2668. [PubMed](#)
3. Zhang B, *et al.* 2021. *Nat Biomed Eng.* 5:1288. [PubMed](#)
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5. Braun DA, *et al.* 2021. *Cancer Cell.* 39:632. [PubMed](#)
6. Bradley D, *et al.* 2022. *Nat Commun.* 13:5606. [PubMed](#)
7. Abd Hamid M *et al.* 2019. *Cancer Immunol Res.* 7(8):1293-1306 . [PubMed](#)

RRID

AB_2566361 (BioLegend Cat. No. 329949)
AB_2566362 (BioLegend Cat. No. 329950)

Antigen Details

Structure	Immunoglobulin superfamily
Distribution	Transiently expressed on CD4 ⁻ CD8 ⁻ thymocytes; upregulated in thymocytes and splenic T and B lymphocytes; expressed on activated myeloid cells
Ligand/Receptor	B7-H1 (also known as PD-L1) and B7-DC (PD-L2)
Cell Type	B cells, Lymphocytes, T cells, Thymocytes, Tregs
Biology Area	Cancer Biomarkers, Immunology, Inhibitory Molecules
Molecular Family	CD Molecules, Immune Checkpoint Receptors
Gene ID	5133

Related Protocols

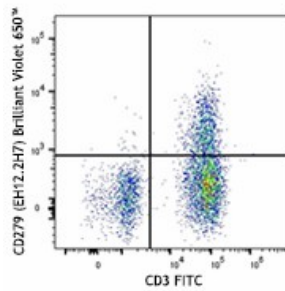
[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

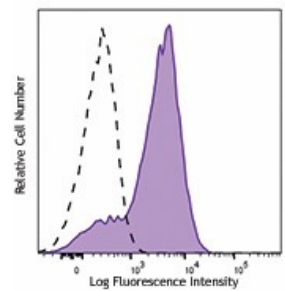
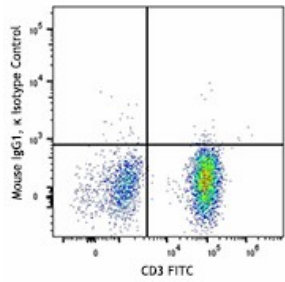
Brilliant Violet 421™ anti-human CD279 (PD-1), Purified anti-human CD279 (PD-1), FITC anti-human CD279 (PD-1), PE anti-human CD279 (PD-1), APC anti-human CD279 (PD-1), Alexa Fluor® 647 anti-human CD279 (PD-1), PerCP/Cyanine5.5 anti-human CD279 (PD-1), APC/Cyanine7 anti-human CD279 (PD-1), Pacific Blue™ anti-human CD279 (PD-1), PE/Cyanine7 anti-human CD279 (PD-1), Purified anti-human CD279 (PD-1) (Maxpar® Ready), Brilliant Violet 605™ anti-human CD279 (PD-1), Ultra-LEAF™ Purified anti-human CD279 (PD-1), Brilliant Violet 711™ anti-human CD279 (PD-1), Brilliant Violet 785™ anti-human CD279 (PD-1), Brilliant Violet 510™ anti-human CD279 (PD-1), Biotin anti-human CD279 (PD-1), PE/Dazzle™ 594 anti-human CD279 (PD-1), Alexa Fluor® 488 anti-human CD279 (PD-1), PerCP anti-human CD279 (PD-1), GolnVivo™ Purified anti-human CD279 (PD-1), Brilliant Violet 650™ anti-human CD279 (PD-1), Alexa Fluor® 700 anti-human CD279 (PD-1), APC/Fire™ 750 anti-human CD279 (PD-1), TotalSeq™-A0088 anti-human CD279 (PD-1), TotalSeq™-B0088 anti-human CD279 (PD-1), TotalSeq™-C0088 anti-human CD279

(PD-1), Brilliant Violet 750™ anti-human CD279 (PD-1), TotalSeq™-D0088 anti-human CD279 (PD-1), PE/Fire™ 640 anti-human CD279 (PD-1), PE/Cyanine5 anti-human CD279 (PD-1)

Product Data



Human peripheral blood lymphocytes were stained with CD3 FITC and CD279 (clone EH12.2H7) Brilliant Violet 650™ (top) or mouse IgG1, κ Brilliant Violet 650™ isotype control (bottom).



PHA-stimulated (three days) human peripheral blood lymphocytes were stained with CD279 (clone EH12.2H7) Brilliant Violet 650™ (filled histogram) or mouse IgG1, κ Brilliant Violet 650™ (open histogram).

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