

APC anti-human CD279 (PD-1) Antibody

Catalog# / Size	367405 / 25 tests 367406 / 100 tests
Clone	NAT105
Regulatory Status	RUO
Other Names	PD1, PDCD1
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 diseases. CD279 is expressed predominantly on activated T cells, B cells, and myeloid cells. PD-L1 (B7-H1, CD274) and PD-L2 (B7-DC, CD273) 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. The interaction with CD279 ligands results in inhibition of T cell proliferation and cytokine secretion.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	YT cell line.
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 APC 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	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 μ l per million cells in 100 μ l staining volume or 5 μ l per 100 μ l of whole blood.
Excitation Laser	Red Laser (633 nm)
Application Notes	Additional reported applications (for the relevant formats of this clone) include: immunofluorescence staining. We recommend using our Ultra Streptavidin (USA) HRP Detection Kit (Multi-Species, DAB) (Cat. No. 929501).
Application References	<ol style="list-style-type: none"> 1. Roncador G, <i>et al.</i> 2007. <i>Haematologica</i> 92:1059. 2. Nam-Cha SH, <i>et al.</i> 2008. <i>Am. J. Surg. Pathol.</i> 32:1252. 3. Rodriguez-Pinilla SM, <i>et al.</i> 2009. <i>Am. J. Surg. Pathol.</i> 33:81.
(PubMed link indicates BioLegend citation)	

Product Citations

1. Lanna A, *et al.* 2022. Nat Cell Biol. 24:1461. [PubMed](#)
2. Woodcock V, *et al.* 2023. BJUI Compass. 4:322. [PubMed](#)
3. Lai X, *et al.* 2023. Commun Biol. 6:537. [PubMed](#)
4. Qin L, *et al.* 2022. Sci Adv. 8:eabn3774. [PubMed](#)
5. Balta E, *et al.* 2023. Front Immunol. 13:1063313. [PubMed](#)
6. Junker F, *et al.* 2021. Cytometry A. 99:832. [PubMed](#)
7. Zhong G, *et al.* 2022. Oncoimmunology. 11:2114740. [PubMed](#)

RRID

AB_2566066 (BioLegend Cat. No. 367405)
AB_2566067 (BioLegend Cat. No. 367406)

Antigen Details

Structure	55 kD type I transmembrane protein.
Distribution	Transiently expressed on CD4 ⁺ and CD8 ⁺ thymocytes, upregulated in thymocytes and splenic T and B lymphocytes, and is expressed on activated myeloid cells.
Function	Signaling, co-stimulation (co-inhibition), immunoglobulin superfamily.
Interaction	SHP-1 and SHP-2.
Ligand/Receptor	PD-L1 (CD274) and PD-L2 (CD273).
Cell Type	B cells, T cells, Thymocytes, Tregs
Biology Area	Cancer Biomarkers, Immunology, Inhibitory Molecules
Molecular Family	CD Molecules, Immune Checkpoint Receptors
Antigen References	1. Francisco LM, Sage PT, and Sharpe AH. 2010. <i>Immunological Rev.</i> 236:219.
Gene ID	5133

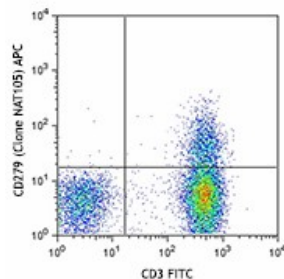
Related Protocols

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

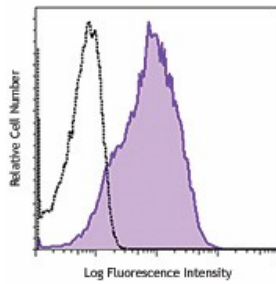
Other Formats

Purified anti-human CD279 (PD-1), Alexa Fluor® 488 anti-human CD279 (PD-1), PE/Cyanine7 anti-human CD279 (PD-1), FITC anti-human CD279 (PD-1), APC/Cyanine7 anti-human CD279 (PD-1), Brilliant Violet 711™ anti-human CD279 (PD-1), APC anti-human CD279 (PD-1), PerCP/Cyanine5.5 anti-human CD279 (PD-1), PE anti-human CD279, Alexa Fluor® 647 anti-human CD279 (PD-1), Biotin anti-human CD279 (PD-1), Brilliant Violet 605™ anti-human CD279 (PD-1), Spark Red™ 718 anti-human CD279 (PD-1) (Flexi-Fluor™), Brilliant Violet 650™ anti-human CD279 (PD-1), PE anti-human CD279 (PD-1), TotalSeq™-Bn1303 anti-human CD279 (PD-1), PE/Dazzle™ 594 anti-human CD279 (PD-1), APC anti-human CD279, Brilliant Violet 510™ anti-human CD279 (PD-1), Brilliant Violet 421™ anti-human CD279 (PD-1), Brilliant Violet 785™ anti-human CD279 (PD-1), GMP PE anti-human CD279

Product Data



Human peripheral blood lymphocytes were stained with CD3 FITC and CD279 (clone NAT105) APC.



PHA-stimulated (three days) human PBMC were stained with CD279 (clone NAT105) APC (filled histogram) or mouse IgG1, κ APC isotype control (open histogram).

For Research Use Only. Not for diagnostic or therapeutic use.

This product is supplied subject to the terms and conditions, including the limited license, located at www.biolegend.com/terms ("Terms") and may be used only as provided in the Terms. Without limiting the foregoing, BioLegend products may not be used for any Commercial Purpose as defined in the Terms, resold in any form, used in manufacturing, or reverse engineered, sequenced, or otherwise studied or used to learn its design or composition without express written approval of BioLegend. Regardless of the information given in this document, user is solely responsible for determining any license requirements necessary for user's intended use and assumes all risk and liability arising from use of the product. BioLegend is not responsible for patent infringement or any other risks or liabilities whatsoever resulting from the use of its products.

BioLegend, the BioLegend logo, and all other trademarks are property of BioLegend, Inc. or their respective owners, and all rights are reserved.

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587