

Purified anti-human CD279 (PD-1) (Maxpar® Ready) Antibody

Catalog# / Size	329941 / 100 µg
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 EDTA.
Preparation	The antibody was purified by affinity chromatography.
Concentration	1.0 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - Quality tested CyTOF® , PG - Verified
Recommended Usage	This product is suitable for use with the Maxpar® Metal Labeling Kits . For metal labeling using Maxpar® Ready antibodies, proceed directly to the step to Partially Reduce the Antibody by adding 100 µl of Maxpar® Ready antibody to 100 µl of 4 mM TCEP-R in a 50 kDa filter and continue with the protocol. Always refer to the latest version of Maxpar® User Guide when conjugating Maxpar® Ready antibodies.
Application Notes	Additional reported applications (for the relevant formats) include: blocking of ligand binding ¹⁻³ , immunohistochemical staining of paraformaldehyde fixed frozen sections ¹³ , 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).
Additional Product Notes	Maxpar® is a registered trademark of Standard BioTools Inc.
Application References	<ol style="list-style-type: none"> 1. Dorfman DM, <i>et al.</i> 2006 <i>Am. J. Surg. Pathol.</i> 30:802. (FA) 2. Radziejcz H, <i>et al.</i> 2007. <i>J. Virol.</i> 81:2545. (FA) 3. Velu V, <i>et al.</i> 2007. <i>J. Virol.</i> 81:5819. (FA) 4. Zahn RC, <i>et al.</i> 2008. <i>J. Virol.</i> 82:11577. PubMed 5. Chang WS, <i>et al.</i> 2008. <i>J. Immunol.</i> 181:6707. (FC) PubMed 6. Nakamoto N, <i>et al.</i> 2009. <i>PLoS Pathog.</i> 5:e1000313. (FA) 7. Jones RB, <i>et al.</i> 2009. <i>J. Virol.</i> 83:8722. (FC) PubMed 8. Vojnov L, <i>et al.</i> 2010. <i>J. Virol.</i> 84:753. (FC) PubMed 9. Radziejcz H, <i>et al.</i> 2010. <i>J. Immunol.</i> 184:2410. (FC) PubMed
(PubMed link indicates BioLegend citation)	

10. Montero P, *et al.* 2011. *J. Immunol.* 186:4618. [PubMed](#)
11. Conrad J, *et al.* 2011. *J. Immunol.* 186:6871. [PubMed](#)
12. Salisch NC, *et al.* 2010. *J. Immunol.* 184:476. (Rhesus reactivity)
13. Li H and Pauza CD. 2015. *Eur. J. Immunol.* 45:298. (IHC)
14. Peterson VM, *et al.* 2017. *Nat. Biotechnol.* 35:936. (PG)
15. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
16. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

Product Citations

1. Sullivan KD, *et al.* 2021. *Cell Reports.* 36(7):109527. [PubMed](#)
2. Neidleman J, *et al.* 2020. *Elife.* 9:00. [PubMed](#)
3. Neidleman J, *et al.* 2020. *Cell Rep Med.* 100081:1. [PubMed](#)
4. Gide TN, *et al.* 2019. *Cancer Cell.* 35:238. [PubMed](#)
5. Galbraith MD, *et al.* 2021. *eLife.* 10:00. [PubMed](#)
6. Roussel M, *et al.* 2021. *Cell Reports Medicine.* 2(6):100291. [PubMed](#)
7. Neidleman J, *et al.* 2021. *Elife.* 10:00. [PubMed](#)
8. Neidleman J, *et al.* 2021. *Cell Rep.* 36:109414. [PubMed](#)
9. Mishra A, *et al.* 2021. *Cell.* 184(13):3394-3409.e20. [PubMed](#)
10. Kennedy-Darling J, *et al.* 2021. *Eur J Immunol.* 51:1262. [PubMed](#)
11. Loo Yau H, *et al.* 2021. *Molecular Cell.* 81(7):1469-1483.e8. [PubMed](#)

RRID

AB_2563734 (BioLegend Cat. No. 329941)

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

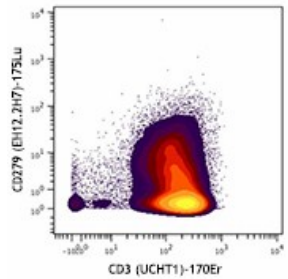
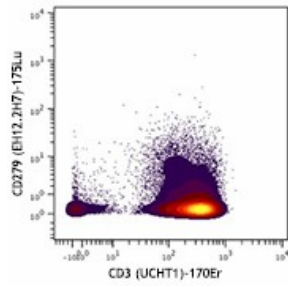
Related Protocols

[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), GoInVivo™ 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 PBMCs were incubated for 3 days in media alone (top) or with PHA (bottom) and then stained with 170Er anti-CD3 (UCHT1) and 175Lu anti-CD279 (EH12.2H7). Data provided by DVS Sciences.

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 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