

Spark PLUS B550™ anti-mouse CD279 (PD-1) Antibody

Catalog# / Size	135271 / 25 µg 135272 / 100 µg
Clone	29F.1A12
Regulatory Status	RUO
Other Names	PD-1, Programmed Death-1, PDCD1
Isotype	Rat IgG2a, κ
Description	CD279, also known as programmed death-1 (PD-1), is a 50-55 kD glycoprotein belonging to the CD28 family of the Ig superfamily. PD-1 is expressed on activated splenic T and B cells and thymocytes. It is induced on activated myeloid cells as well. PD-1 is involved in lymphocyte clonal selection and peripheral tolerance through binding its ligands, B7-H1 (PD-L1) and B7-DC (PD-L2). It has been reported that PD-1 and PD-L1 interactions are critical to positive selection and play a role in shaping the T cell repertoire. PD-L1 negative costimulation is essential for prolonged survival of intratesticular islet allografts.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	PD-1 cDNA followed by PD-1-Ig fusion protein
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography and conjugated with Spark PLUS B550™ under optimal conditions.
Concentration	0.2 mg/mL
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 ≤ 0.5 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. * Spark PLUS B550™ has a maximum excitation of 516 nm and a maximum emission of 540 nm.
Excitation Laser	Blue Laser (488 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue ³ , <i>in vivo</i> blocking of PD-1 binding to its ligands ^{2,3} , and spatial biology (IBEX) ^{5,6} .
Application References	<ol style="list-style-type: none">1. Good-Jacobson KL, <i>et al.</i> 2010. <i>Nat. Immunol.</i> 11:535. (FC) PubMed2. Lázár-Molnár E, <i>et al.</i> 2008. <i>Proc. Natl. Acad. Sci. USA</i> 105:2658. (Block)3. Liang SC, <i>et al.</i> 2003. <i>Eur. J. Immunol.</i> 33:2706. (FC, IHC, Block)4. Tobias J, <i>et al.</i> 2020. <i>Front Immunol.</i> 11:895 (FC, ELISA) PubMed5. Radtke AJ, <i>et al.</i> 2020. <i>Proc Natl Acad Sci U S A.</i> 117:33455-65. (SB) PubMed6. Radtke AJ, <i>et al.</i> 2022. <i>Nat Protoc.</i> 17:378-401. (SB) PubMed
(PubMed link indicates BioLegend citation)	
RRID	AB_3674986 (BioLegend Cat. No. 135271)

Antigen Details

Structure	A 50-55 kD glycoprotein belonging to the CD28 family of the Ig superfamily.
Distribution	Induced on splenic T and B lymphocytes, thymocytes, and myeloid cells after stimulation.
Function	Involved in lymphocyte clonal selection and peripheral tolerance, prolonged survival of allografts.
Ligand/Receptor	B7-H1 (PD-L1) and B7-DC (PD-L2)
Cell Type	B cells, T cells
Biology Area	Cancer Biomarkers, Immunology, Inhibitory Molecules
Molecular Family	CD Molecules, Immune Checkpoint Receptors
Antigen References	<ol style="list-style-type: none"> 1. Nishimura H, <i>et al.</i> 2001. <i>Science</i> 291:319 2. Agata Y, <i>et al.</i> 1996. <i>Int. Immunol.</i> 8:765 3. Liang SC, <i>et al.</i> 2003. <i>Eur. J. Immunol.</i> 33:2706 4. Barber DL, <i>et al.</i> 2006. <i>Nature</i> 439:682 5. Keir ME, <i>et al.</i> 2005. <i>J. Immunol.</i> 175:7372 6. Koehn BH, <i>et al.</i> 2008. <i>J Immunol.</i> 181:5313
Gene ID	18566

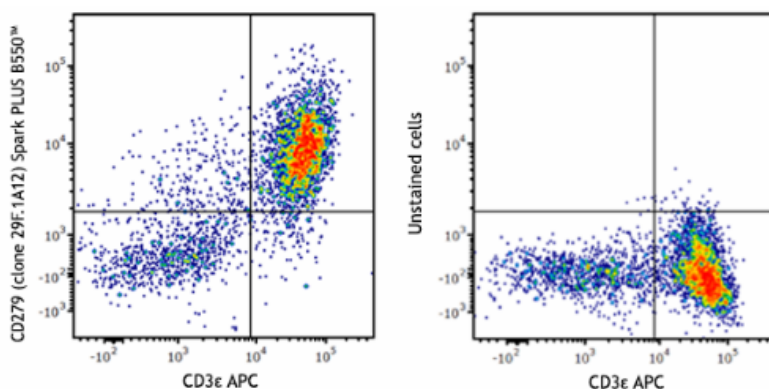
Related Protocols

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

Other Formats

PE anti-mouse CD279 (PD-1), Purified anti-mouse CD279 (PD-1), PerCP/Cyanine5.5 anti-mouse CD279 (PD-1), APC anti-mouse CD279 (PD-1), Biotin anti-mouse CD279 (PD-1), FITC anti-mouse CD279 (PD-1), PE/Cyanine7 anti-mouse CD279 (PD-1), Brilliant Violet 421™ anti-mouse CD279 (PD-1), Brilliant Violet 605™ anti-mouse CD279 (PD-1), APC/Cyanine7 anti-mouse CD279 (PD-1), Brilliant Violet 785™ anti-mouse CD279 (PD-1), PE/Dazzle™ 594 anti-mouse CD279 (PD-1), Alexa Fluor® 647 anti-mouse CD279 (PD-1), Brilliant Violet 711™ anti-mouse CD279 (PD-1), GolinVivo™ Purified anti-mouse CD279 (PD-1), APC/Fire™ 750 anti-mouse CD279 (PD-1), Brilliant Violet 510™ anti-mouse CD279 (PD-1), Ultra-LEAF™ Purified anti-mouse CD279 (PD-1), APC/Fire™ 810 anti-mouse CD279 (PD-1) Antibody, PE/Fire™ 810 anti-mouse CD279 (PD-1) Antibody, PE/Cyanine5 anti-mouse CD279 (PD-1), PE/Fire™ 640 anti-mouse CD279 (PD-1), Spark Red™ 718 anti-mouse CD279 (PD-1), PerCP/Fire™ 806 anti-mouse CD279 (PD-1), Brilliant Violet 750™ anti-mouse CD279 (PD-1), PerCP/Fire™ 780 anti-mouse CD279 (PD-1), PE/Fire™ 700 anti-mouse CD279 (PD-1), PE/Fire™ 744 anti-mouse CD279 (PD-1), Brilliant Violet 650™ anti-mouse CD279 (PD-1), Spark Blue™ 574 anti-mouse CD279 (PD-1) (Flexi-Fluor™), Spark PLUS B550™ anti-mouse CD279 (PD-1), Spark YG™ 581 anti-mouse CD279 (PD-1) (Flexi-Fluor™), Spark YG™ 593 anti-mouse CD279 (PD-1) (Flexi-Fluor™) Antibody, Spark NIR™ 685 anti-mouse CD279 (PD-1) (Flexi-Fluor™) Antibody

Product Data



Con A+IL-2 stimulated BALB/c splenocytes (3 days) were stained with anti-mouse CD3ε (clone 145-2C11) APC and anti-mouse CD279 (PD-1) (clone 29F.1A12) Spark PLUS B550™ (left) or stained with anti-mouse CD3ε (clone 145-2C11) APC only (right).

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