PE/Fire™ 744 anti-mouse CD279 (PD-1) Antibody

Catalog# / Size	135269 / 25 µg 135270 / 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 PE/Fire™ 744 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 ≤ 0.06 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. True-Stain Monocyte Blocker™ (Cat No. 426102) is recommended to minimize non-specific staining of PE/Fire™ 744 on monocytes and macrophages. * PE/Fire™ 744 has a maximum excitation of 565 nm and a maximum emission of 744 nm.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue[3], *in vivo* blocking of PD-1 binding to its ligands[2,3], and spatial biology (IBEX)[5,6].

Application References

(PubMed link indicates BioLegend citation)

1. Good-Jacobson KL, *et al.* 2010. *Nat. Immunol.* 11:535. (FC) PubMed
2. Lázár-Molnár E, *et al.* 2008. *Proc. Natl. Acad. Sci. USA* 105:2658. (Block)
3. Liang SC, *et al.* 2003. *Eur. J. Immunol.* 33:2706. (FC, IHC, Block)
4. Tobias J, *et al.* 2020. *Front Immunol.* 11:895 (FC, ELISA) PubMed
5. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) PubMed
6. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) PubMed

RRID	AB_3674985 (BioLegend Cat. No. 135269) AB_3674985 (BioLegend Cat. No. 135270)

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	1. Nishimura H, *et al.* 2001. *Science* 291:319 2. Agata Y, *et al.* 1996. *Int. Immunol.* 8:765 3. Liang SC, *et al.* 2003. *Eur. J. Immunol.* 33:2706 4. Barber DL, *et al.* 2006. *Nature* 439:682 5. Keir ME, *et al.* 2005. *J. Immunol.* 175:7372 6. Koehn BH. et al. 2008. J Immunol. 181:5313
Gene ID	18566

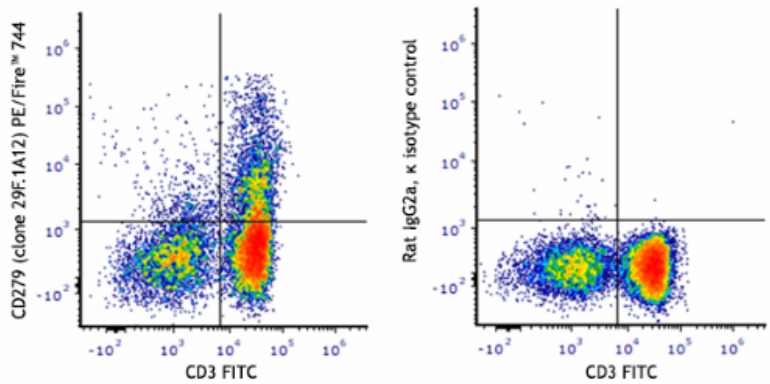
Related Protocols

- Cell Surface Flow Cytometry Staining Protocol

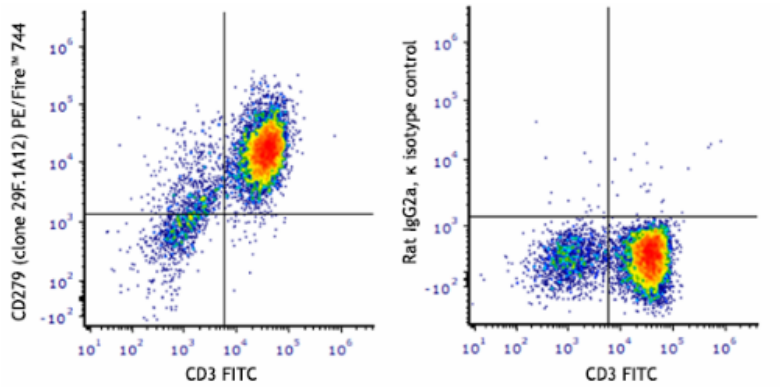
Other Formats

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), GoInVivo™ 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



BALB/c mouse splenocytes were stained with anti-mouse CD3 (clone 145-2C11) FITC and anti-mouse CD279 (PD-1) (clone 29F1.A12) PE/Fire™ 744 (left) or rat IgG2a, κ PE/Fire™ 744 isotype control (right).



Con-A and IL-2 stimulated (3 days) BALB/c mouse splenocytes were stained with anti-mouse CD3 (clone 145-2C11) FITC and anti-mouse CD279 (PD-1) (clone 29F1.A12) PE/Fire™ 744 (left) or rat IgG2a, κ PE/Fire™ 744 isotype control (right).

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