

Spark YG™ 570 anti-human CD274 (B7-H1, PD-L1) Antibody

Catalog# / Size	329759 / 25 µg 329760 / 100 µg
Clone	29E.2A3
Regulatory Status	RUO
Other Names	Programmed cell death ligand 1 (PD-L1), B7 homolog 1 (B7-H1)
Isotype	Mouse IgG2b, κ
Description	CD274, also known as PD-L1 and B7-H1, is type I transmembrane glycoprotein that serves as a ligand for CD279 (PD-1). This interaction is believed to regulate the balance between the stimulatory and inhibitory signals needed for responses to microbes and maintenance of self-tolerance. CD274 is involved in the costimulation of T cell proliferation and IL-10 and IFN-γ production in an IL-2-dependent and CD279-independent manner. Conflicting data has shown that CD274 can inhibit T cell proliferation and cytokine production, and alternatively, enhance T cell activation. Other studies suggest that CD274 may signal bidirectionally, raising interesting implications for its expression in a wide variety of cell types, including T and B cells, antigen-presenting cells, and nonhematopoietic cells.

Product Details

Verified Reactivity	Human
Reported Reactivity	African Green, Baboon, Cynomolgus, Rhesus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Full length human PD-L1
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography and conjugated with Spark YG™ 570 under optimal conditions.
Concentration	0.5 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	IHC-P - Quality tested FC - Verified
Recommended Usage	Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration range of 5 - 10 µg/mL is suggested. For flow cytometric staining, the suggested use of this reagent is ≤ 2.0 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application. * Spark YG™ 570 has a maximum excitation of 555 nm and a maximum emission of 570 nm.
Excitation Laser	Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Clone 29E.2A3 is reported to recognize an epitope on PD-L1 within the PD-L1-CD80 binding region ⁵ . Additional reported applications (for the relevant formats) include: blocking ¹⁻³ and immunohistochemical staining of acetone-fixed frozen sections ¹ . The Ultra-LEAF™ purified antibody (Endotoxin < 0.01 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 329715, 329716, 329745 - 329748). It has been observed that clone 29E.2A3 is able to bind to Alexa Fluor® 700 antibody conjugates during multi-color immunofluorescent staining. This interaction can be resolved by sequentially staining with the 29E.2A3 antibody first and then followed by the Alexa Fluor® 700 conjugate of interest.

Clone 29E.2A3 does not work in Western blot applications⁷.

Application References

(PubMed link indicates BioLegend citation)

1. Brown J, *et al.* 2003. *J. Immunol.* 170:1257. (FC, IHC, Block)
2. Radziejewicz H, *et al.* 2007. *J. Virol.* 81:2545. (Block)
3. Nakamoto N, *et al.* 2009. *PLoS Pathog.* 5:e1000313. (Block)
4. Barsoum IB, *et al.* 2014. *Cancer Res.* 74:665. [PubMed](#)
5. Haile, S *et al.* 2013. *J. Immunol.* 191:2829.
6. RL M, *et al.* 2015. *PNAS.* 112:6506-6514. [PubMed](#)
7. Mahoney KM, *et al.* 2015. *Cancer Immunol. Res.* 3:1308.

RRID

AB_2924537 (BioLegend Cat. No. 329759)
AB_2924537 (BioLegend Cat. No. 329760)

Antigen Details

Distribution	T cells, B cells, NK cells, monocytes/macrophages, granulocytes and dendritic cells
Function	CD274 is involved in the costimulatory signal, essential for T lymphocyte proliferation and production of IL-10 and IFN- γ , in an IL-2-dependent and a PD-1-CD1-independent manner. Its interaction with PD-1-CD1 inhibits T-cell proliferation and cytokine production.
Ligand/Receptor	PD-1 (PDCD1)
Cell Type	B cells, Dendritic cells, Fibroblasts, Granulocytes, Macrophages, Monocytes, NK cells, T cells
Biology Area	Cancer Biomarkers, Costimulatory Molecules, Immunology
Molecular Family	Adhesion Molecules, CD Molecules, Immune Checkpoint Receptors
Antigen References	1. Sharpe A, <i>et al.</i> 2007. <i>Nat. Immunol.</i> 8:239.
Gene ID	29126

Related Protocols

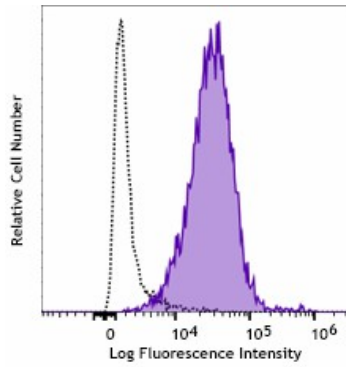
[Cell Surface Flow Cytometry Staining Protocol](#)

[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

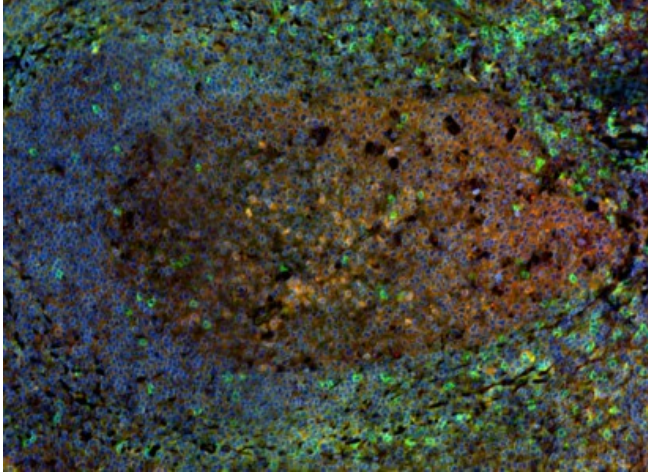
Other Formats

Purified anti-human CD274 (B7-H1, PD-L1), Biotin anti-human CD274 (B7-H1, PD-L1), PE anti-human CD274 (B7-H1, PD-L1), APC anti-human CD274 (B7-H1, PD-L1), Brilliant Violet 421™ anti-human CD274 (B7-H1, PD-L1), Ultra-LEAF™ Purified anti-human CD274 (B7-H1, PD-L1), PE/Cyanine7 anti-human CD274 (B7-H1, PD-L1), Purified anti-human CD274 (B7-H1, PD-L1) (Maxpar® Ready), Brilliant Violet 711™ anti-human CD274 (B7-H1, PD-L1), Brilliant Violet 605™ anti-human CD274 (B7-H1, PD-L1), GoInVivo™ Purified anti-human CD274 (B7-H1, PD-L1), PE/Dazzle™ 594 anti-human CD274 (B7-H1, PD-L1), Brilliant Violet 785™ anti-human CD274 (B7-H1, PD-L1), Brilliant Violet 510™ anti-human CD274 (B7-H1, PD-L1), PerCP/Cyanine5.5 anti-human CD274 (B7-H1, PD-L1), Brilliant Violet 650™ anti-human CD274 (B7-H1, PD-L1), Alexa Fluor® 594 anti-human CD274 (B7-H1, PD-L1), TotalSeq™-A0007 anti-human CD274 (B7-H1, PD-L1), TotalSeq™-B0007 anti-human CD274 (B7-H1, PD-L1), TotalSeq™-C0007 anti-human CD274 (B7-H1, PD-L1), TotalSeq™-D0007 anti-human CD274 (B7-H1, PD-L1), PE/Fire™ 810 anti-human CD274 (B7-H1, PD-L1) Antibody, PE/Cyanine5 anti-human CD274 (B7-H1, PD-L1), Spark YG™ 570 anti-human CD274 (B7-H1, PD-L1)

Product Data



PHA-stimulated (3 days) human peripheral blood lymphocytes were stained with anti-human CD274 (B7-H1, PD-L1) (clone 29E.2A3) Spark YG™ 570 (filled histogram) or mouse IgG2b, κ isotype control (open histogram).



Human paraffin-embedded tonsil tissue slices were prepared with a standard protocol of deparaffinization and rehydration. Antigen retrieval was done with citrate buffer 1X pH 6.0 at 95°C for 40 minutes. Tissue was washed with PBS/0.05% Tween-20 twice for five minutes and blocked with 5% FBS and 0.2% gelatin for 30 minutes. Then, the tissue was stained with 10 µg/mL of anti-human CD274 (B7-H1, BD-L1) (clone 29E.2A3) Spark YG™ 570 (red) and anti-human CD8a (green) at 4°C overnight. Nuclei were counterstained with DAPI (blue).

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