

## Brilliant Violet 650™ anti-human CD274 (B7-H1, PD-L1) Antibody

<b>Catalog# / Size</b>	329739 / 25 tests 329740 / 100 tests
<b>Clone</b>	29E.2A3
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Programmed cell death ligand 1 (PD-L1), B7 homolog 1 (B7-H1)
<b>Isotype</b>	Mouse IgG2b, κ
<b>Description</b>	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

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	African Green, Baboon, Cynomolgus, Rhesus
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Full length human PD-L1
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 650™ under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.  Brilliant Violet 650™ excites at 405 nm and emits at 645 nm. The bandpass filter 660/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. <b>Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.</b> Refer to your instrument manual or manufacturer for support. Brilliant Violet 650™ is a trademark of Sirigen Group Ltd.  <a href="#">Learn more about Brilliant Violet™.</a>
<b>Excitation Laser</b>	Violet Laser (405 nm)

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## Application Notes

Clone 29E.2A3 is reported to recognize an epitope on PD-L1 within the PD-L1-CD80 binding region<sup>5</sup>. Additional reported applications (for the relevant formats) include: blocking<sup>1-3</sup> and immunohistochemical staining of acetone-fixed frozen sections<sup>1</sup>. 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 applications<sup>7</sup>.

## 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.

## Product Citations

1. Sabree SA, *et al.* 2021. *J Immunother Cancer.* 9: . [PubMed](#)

## RRID

AB\_2629613 (BioLegend Cat. No. 329739)  
AB\_2629614 (BioLegend Cat. No. 329740)

## Antigen Details

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<b>Distribution</b>	T cells, B cells, NK cells, monocytes/macrophages, granulocytes and dendritic cells
<b>Function</b>	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.
<b>Ligand/Receptor</b>	PD-1 (PDCD1)
<b>Cell Type</b>	B cells, Dendritic cells, Fibroblasts, Granulocytes, Macrophages, Monocytes, NK cells, T cells
<b>Biology Area</b>	Cancer Biomarkers, Costimulatory Molecules, Immunology
<b>Molecular Family</b>	Adhesion Molecules, CD Molecules, Immune Checkpoint Receptors
<b>Antigen References</b>	1. Sharpe A, <i>et al.</i> 2007. <i>Nat. Immunol.</i> 8:239.
<b>Gene ID</b>	<a href="#">29126</a>

## Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

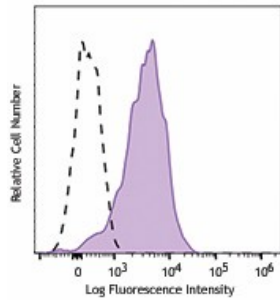
## Other Formats

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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), GolnVivo™ 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

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PHA-stimulated (3 days) human peripheral blood mononuclear cells were stained with CD274 (clone 29E.2A3) Brilliant Violet 650™ (filled histogram) or mouse IgG2b, κ Brilliant Violet 650™ isotype control (open histogram).

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