

## Spark PLUS UV395™ anti-human CD274 (B7-H1, PD-L1) Antibody

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| <b>Catalog# / Size</b>   | 329761 / 25 tests<br>329762 / 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, $\kappa$  |
| <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- $\gamma$ 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 Spark PLUS UV395™ under optimal conditions.  |
| <b>Concentration</b>          | Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our <a href="#">Certificate of Analysis</a> online tool.)   |
| <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 $\mu$ L per million cells in 100 $\mu$ L staining volume or 5 $\mu$ L per 100 $\mu$ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.<br><br>* Spark PLUS UV395™ has a maximum excitation of 355 nm and a maximum emission of 385 nm.   |
| <b>Excitation Laser</b>       | Ultraviolet Laser (355 nm)  |
| <b>Application Notes</b>      | 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/ $\mu$ g, Azide-Free, 0.2 $\mu$ m filtered) is recommended for functional assays (Cat. No. 329715, 329716, 329745 - 329748).<br><br>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. Radziewicz 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\_3683344 (BioLegend Cat. No. 329761)  
AB\_3683344 (BioLegend Cat. No. 329762)

## 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- $\gamma$ , 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](#)

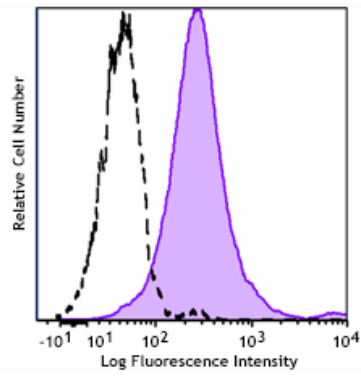
## Other Formats

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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), 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), Spark PLUS UV395™ anti-human CD274 (B7-H1, PD-L1)

## Product Data

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PHA-stimulated human peripheral blood lymphocytes (3 days) were stained with anti-human CD274 (B7-H1, PD-L1) (clone 29E.2A3) Spark PLUS UV395™ (filled histogram) or mouse IgG2b,  $\kappa$  Spark PLUS UV395™ isotype control (open histogram).

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