

## Ultra-LEAF™ Purified anti-mouse CD274 (B7-H1, PD-L1) Antibody

<b>Catalog# / Size</b>	124341 / 100 mg 124339 / 25 mg 124340 / 50 mg 124337 / 100 µg 124318 / 1 mg 124338 / 5 mg
<b>Clone</b>	10F.9G2
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	B7-H1, PD-L1
<b>Isotype</b>	Rat IgG2b, κ
<b>Description</b>	CD274, also known as B7-H1 or programmed death ligand 1 (PD-L1), is a 40 kD type I transmembrane protein and a member of the B7 family within the immunoglobulin receptor superfamily. It is expressed on T cells, B cells, NK cells, dendritic cells, IFN-γ activated endothelial cells, and monocytes. B7-H1 is one of the ligands of PD-1. The interaction of B7-H1 with PD-1 plays an important role in the inhibition of T cell responses. Other studies have shown that B7-H1 is able to costimulate T cell growth and cytokine production. CD274 is involved in costimulation essential for T cell proliferation and production of IL-10 and IFN-γ, in an IL-2-dependent and a PD-1-independent manner. Its interaction with PD-1 inhibits T cell proliferation and cytokine production.

### Product Details

<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Formulation</b>	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is <0.01 EU/µg of the protein (<0.001 ng/µg of the protein) as determined by the LAL test.
<b>Preparation</b>	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.
<b>Concentration</b>	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL. Older lots may have also been bottled at 1 mg/mL. 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. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
<b>Application</b>	<a href="#">FC - Quality tested</a> <a href="#">Block - Reported in the literature, not verified in house</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 ≤ 1.0 µg per million cells in 100 µL volume or 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes</b>	Additional reported applications (for the relevant formats) include: immunofluorescence <sup>4</sup> , blocking <sup>6,7,8,9</sup> , and immunohistochemistry of acetone-fixed frozen sections <sup>4, 11</sup> . The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 124303). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 124318) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).
<b>Application References</b>	1. Maier H, <i>et al.</i> 2007. <i>J. Immunol.</i> 178:2714. 2. Meng Q, <i>et al.</i> 2006. <i>Invest. Ophthalmol. Vis. Sci.</i> 47:4444. <a href="#">PubMed</a> 3. Scarlett UK, <i>et al.</i> 2012. <i>J Exp Med.</i> 209:495. <a href="#">PubMed</a> 4. Grabie N, <i>et al.</i> 2007. <i>Circulation</i> 116:2062. (IF, IHC)
<b>(PubMed link indicates BioLegend citation)</b>	

5. Paterson AM, *et al.* 2011. *J. Immunol.* 187:1097.
6. Channappanavar R, *et al.* 2012. *PLoS One* 7:e39757. (Block)
7. Schreiber HA, *et al.* 2010. *PLoS One* 5:e11453. (Block) [PubMed](#)
8. Muthumani K, *et al.* 2011. *J. Immunol.* 187:2932. (Block) [PubMed](#)
9. Cripps JG, *et al.* 2010. *Hepatology* 52:1350. (Block) [PubMed](#)
10. Murakami R, *et al.* 2013. *PLoS One.* 8:73270. [PubMed](#)
11. Riella LV, *et al.* 2011. *Am. J. Transplant* 11:832-40. (IHC)
12. Lei GS, *et al.* 2015. *Infect Immun.* 83:572. [PubMed](#)

#### Product Citations

1. Muthumani K, *et al.* 2012. *J Immunol.* 187:2932. [PubMed](#)
2. Dagkonaki A, *et al.* 2022. *Front Immunol.* 13:972003. [PubMed](#)
3. Bonamichi-Santos R, *et al.* 2021. *Front Immunol.* 12:655958. [PubMed](#)
4. Cripps J, *et al.* 2010. *Hepatology.* 52:1350. [PubMed](#)

#### RRID

AB\_2800599 (BioLegend Cat. No. 124341)  
 AB\_2800597 (BioLegend Cat. No. 124339)  
 AB\_2800598 (BioLegend Cat. No. 124340)  
 AB\_2783069 (BioLegend Cat. No. 124337)  
 AB\_2561484 (BioLegend Cat. No. 124318)  
 AB\_2800596 (BioLegend Cat. No. 124338)

### Antigen Details

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<b>Structure</b>	40 kD type I transmembrane protein member of B7 family within the immunoglobulin receptor superfamily
<b>Distribution</b>	T cells, B cells, NK cells, dendritic cells, IFN- $\gamma$ activated endothelial cells, and monocytes
<b>Ligand/Receptor</b>	PD-1 (PDCD1)
<b>Cell Type</b>	B cells, Dendritic cells, Endothelial cells, 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>	<ol style="list-style-type: none"> <li>1. Sharpe A, <i>et al.</i> 2007. <i>Nat. Immunol.</i> 8:239.</li> <li>2. Dong H, <i>et al.</i> 1999. <i>Nat. Med.</i> 5:1365.</li> <li>3. Freeman G, <i>et al.</i> 2000. <i>J. Exp. Med.</i> 192:1027.</li> </ol>
<b>Gene ID</b>	<a href="#">60533</a>

### Related Protocols

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[Cell Surface Flow Cytometry Staining Protocol](#)

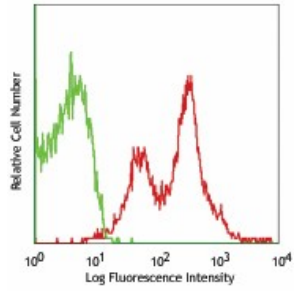
### Other Formats

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Purified anti-mouse CD274 (B7-H1, PD-L1), Biotin anti-mouse CD274 (B7-H1, PD-L1), PE anti-mouse CD274 (B7-H1, PD-L1), Brilliant Violet 421™ anti-mouse CD274 (B7-H1, PD-L1), APC anti-mouse CD274 (B7-H1, PD-L1), PE/Cyanine7 anti-mouse CD274 (B7-H1, PD-L1), Ultra-LEAF™ Purified anti-mouse CD274 (B7-H1, PD-L1), Brilliant Violet 711™ anti-mouse CD274 (B7-H1, PD-L1), Brilliant Violet 605™ anti-mouse CD274 (B7-H1, PD-L1), PE/Dazzle™ 594 anti-mouse CD274 (B7-H1, PD-L1), GolnVivo™ Purified anti-mouse CD274 (B7-H1, PD-L1), Brilliant Violet 785™ anti-mouse CD274 (B7-H1, PD-L1), PerCP/Cyanine5.5 anti-mouse CD274 (B7-H1, PD-L1), Brilliant Violet 650™ anti-mouse CD274 (B7-H1, PD-L1), PE/Cyanine5 anti-mouse CD274 (B7-H1, PD-L1), PE/Fire™ 640 anti-mouse CD274 (B7-H1, PD-L1), Spark Red™ 718 anti-mouse CD274 (B7-H1, PD-L1)

### Product Data

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C57/B6 mouse splenocytes were stained with Ultra-LEAF™ purified anti-CD274 (clone 10F.9G2) (red line) or purified rat IgG2b, κ isotype control (green line), followed by biotinylated anti-rat IgG and Sav-PE.

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