Purified anti-mouse CD274 (B7-H1, PD-L1) Antibody

Catalog# / Size	124301 / 50 µg 124302 / 500 µg
Clone	10F.9G2
Other Names	B7-H1, PD-L1
Isotype	Rat IgG2b, κ
Description	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

Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	FC - *Quality tested* IHC-F - *Validated* IF, Block - *Reported in the literature*
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 ≤ 1.0 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	Additional reported applications (for the relevant formats) include: immunofluorescence[4], blocking[6,7,8,9], and immunohistochemistry of acetone-fixed frozen sections[4, 11]. 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).

Application References

(PubMed link indicates BioLegend citation)

1. Maier H, et al. 2007. J. Immunol. 178:2714.
2. Meng Q, et al. 2006. Invest. Ophthalmol. Vis. Sci. 47:4444. PubMed
3. Scarlett UK, et al. 2012. J Exp Med. 209:495. PubMed
4. Grabie N, et al. 2007. Circulation 116:2062. (IF, IHC)
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. Meng Q, et al. 2006. Invest Ophthalmol Vis Sci. 47:4444. PubMed
2. Scarlett U, et al. 2012. J Exp Med. 209:425. PubMed
3. Bassi &, et al. 2012. Diabetes. 61:2534. PubMed
4. Murakami R, et al. 2013. PLoS One. 8:73270. PubMed
5. Lei G, et al. 2015. Infect Immun . 83:572. PubMed
6. Huang B, et al. 2015. PLoS One. 10: 0134715. PubMed
7. Herold M, et al. 2015. J Immunol. 195: 3584 - 3595. PubMed

8. Hirose T, et al. 2017. PLoS One. 12(6):e0178765. PubMed
9. Speranza MC, et al. 2018. Neuro Oncol. 20:225. PubMed
10. Mitchell LA, et al. 2019. Oncotarget. 10:2252. PubMed
11. Dieterich LC, et al. 2017. Front Immunol. 0.379166667. PubMed
12. Giles DA, et al. 2018. J Clin Invest. 128:5322. PubMed

RRID

AB_961226 (BioLegend Cat. No. 124301)
AB_961228 (BioLegend Cat. No. 124302)

Antigen Details

Structure

40 kD type I transmembrane protein member of B7 family within the immunoglobulin receptor superfamily

Distribution

T cells, B cells, NK cells, dendritic cells, IFN-γ activated endothelial cells, and monocytes

Ligand/Receptor

PD-1 (PDCD1)

Cell Type

B cells, Dendritic cells, Endothelial cells, 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, et al. 2007. Nat. Immunol. 8:239.
2. Dong H, et al. 1999. Nat. Med. 5:1365.
3. Freeman G, et al. 2000. J. Exp. Med. 192:1027.

Gene ID

60533

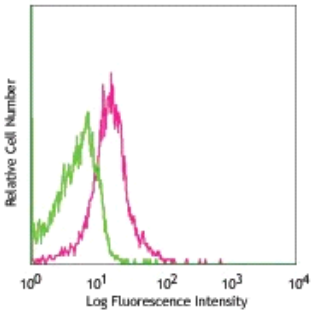
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

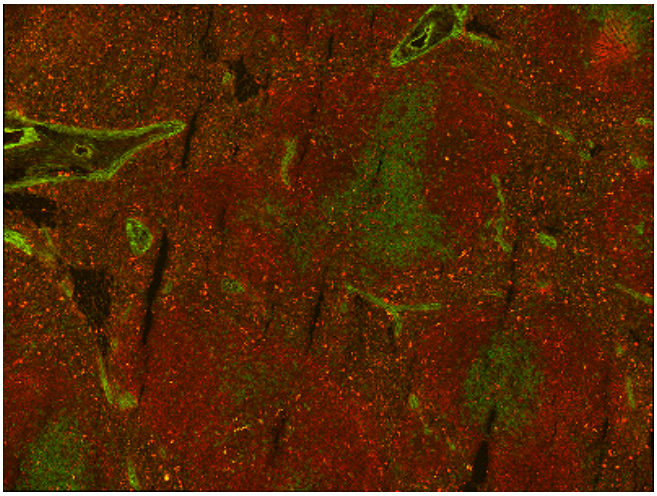
Other Formats

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), GoInVivo™ 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)

Product Data



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



Fresh, frozen mouse spleen was stained with purified CD274 clone 10F.9G2 conjugated and detected with a Cy3 CODEX™ oligonucleotide duplex (red). Samples were counterstained with TCR FITC (greeb). Data generated at Akoya Biosciences, Inc. using the CODEX™ technology.

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