

Datasheet: MCA2626A647

Description:	RAT ANTI MOUSE CD274:Alexa Fluor® 647
Specificity:	CD274
Other names:	PD-L1
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	MIH6
Isotype:	IgG2a
Quantity:	100 TESTS/1ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	■			Neat - 1/10

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species	Mouse						
Product Form	Purified IgG conjugated to Alexa Fluor® 647 - liquid						
Max Ex/Em	<table border="1"> <thead> <tr> <th>Fluorophore</th> <th>Excitation Max (nm)</th> <th>Emission Max (nm)</th> </tr> </thead> <tbody> <tr> <td>Alexa Fluor®647</td> <td>650</td> <td>665</td> </tr> </tbody> </table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	Alexa Fluor®647	650	665
Fluorophore	Excitation Max (nm)	Emission Max (nm)					
Alexa Fluor®647	650	665					
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant						
Buffer Solution	Phosphate buffered saline						
Preservative	0.09% Sodium Azide (NaN ₃)						
Stabilisers	1% Bovine Serum Albumin						
Approx. Protein Concentrations	IgG concentration 0.05mg/ml						
Immunogen	Mouse CD274 - transfected L5178Y cells.						
External Database Links	UniProt: Q9EP73 Related reagents						

Entrez Gene:[60533](#) Cd274 [Related reagents](#)**Synonyms**

B7h1, Pdc111, Pdc11g1, Pdl1

Fusion Partners

Spleen cells from immunized SD rats were fused with cells of the P3U1 myeloma cell line.

Specificity

Rat anti Mouse CD274 antibody, clone MIH6 detects mouse CD274, also known as B7-H1 and PD-1L, a single pass type I cell membrane glycoprotein, a member of the B7 family of co-stimulatory molecules. CD274 is expressed constitutively on macrophages and dendritic cells, and is induced on activated T-cells, B-cells ([Ishada et al. 2002](#)), endothelial cells ([Eppihimer et al. 2002](#)) and epithelial cells in response to Interferons alpha, beta and gamma.

CD274 is reported to possess dual functions; inhibition of activated effector T cells and co-stimulation of naïve T cells ([Selenko-Gebauer et al. 2003](#)). CD274 inhibits proliferation of activated T cells via ligation to the co-inhibitory molecule CD279 (programmed death-1; PD-1) leading to the secretion of the regulatory cytokine interleukin-10 ([Cao et al. 2003](#)). CD274 has also been shown to costimulate early T cell priming and differentiation.

Deregulated CD274 function has been reported in chronic viral and intracellular bacterial infection, as well as in many autoimmune diseases and cancers ([Iwai et al. 2002](#)).

Flow Cytometry

Use 10ul of the suggested working dilution to label 1×10^6 cells in 100ul.

The Fc region of monoclonal antibodies may bind non-specifically to cells expressing low affinity Fc receptors. This may be reduced by using SeroBlock FcR ([BUF041A/B](#)).

References

1. Kanai, T. *et al.* (2003) Blockade of B7-H1 suppresses the development of chronic intestinal inflammation. [J Immunol. 171 \(8\): 4156-63.](#)
2. Yamazaki, T. *et al.* (2002) Expression of programmed death 1 ligands by murine T cells and APC. [J Immunol. 169 \(10\): 5538-45.](#)
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7. Yao, L. *et al.* (2016) Characterization of Liver Monocytic Myeloid-Derived Suppressor Cells and Their Role in a Murine Model of Non-Alcoholic Fatty Liver Disease. [PLoS One. 11 \(2\): e0149948.](#)
8. López-Medina, M. *et al.* (2015) *Salmonella* impairs CD8 T cell response through PD-1: PD-L axis. [Immunobiology. 220 \(12\): 1369-80.](#)
9. Waddell, A. *et al.* (2011) Colonic eosinophilic inflammation in experimental colitis is mediated by Ly6C(high) CCR2(+) inflammatory monocyte/macrophage-derived CCL11. [J Immunol. 186 \(10\): 5993-6003.](#)
10. Naujoks, M. *et al.* (2014) Alterations of costimulatory molecules and instructive cytokines expressed by dendritic cells in the microenvironment of an endogenous mouse lymphoma. [Cancer Immunol Immunother. 63 \(5\): 491-9.](#)
11. Arrevillaga-Boni, G. *et al.* (2014) Intercellular communication through contacts between continuous pseudopodial extensions in a macrophage-like cell line. [Cell Commun Adhes. 21 \(4\): 213-20.](#)

12. Volchenkov, R. *et al.* (2013) Type 1 regulatory T cells and regulatory B cells induced by tolerogenic dendritic cells. [Scand J Immunol. 77 \(4\): 246-54.](#)

Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life	18 months from date of despatch.
Acknowledgements	This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: 10041: https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA1212A647\)](#)

Recommended Useful Reagents

[MOUSE SEROBLOCK FcR \(BUF041A\)](#)

[MOUSE SEROBLOCK FcR \(BUF041B\)](#)

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