

Datasheet: MCA2626

Description:	RAT ANTI MOUSE CD274		
Specificity:	CD274		
Other names:	PD-L1		
Format:	Purified		
Product Type:	Monoclonal Antibody		
Clone:	MIH6		
Isotype:	lgG2a		
Quantity:	0.25 mg		

# **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 <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	•			Neat - 1/10
Immunohistology - Frozen				
ELISA				
Immunoprecipitation	•			
Western Blotting				
Functional Assays			•	

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 - liquid	
Preparation	Purified IgG prepared by affinity chromatography on Protein (supernatant	G from tissue culture
Buffer Solution	Phosphate buffered saline	
Preservative Stabilisers	0.09% Sodium Azide (NaN <sub>3</sub> )	

Carrier Free	Yes	
Approx. Protein Concentrations	IgG concentration 1.0mg/ml	
Immunogen	Mouse CD274 - transfected L5178Y cells.	
External Database Links	UniProt:  Q9EP73 Related reagents  Entrez Gene:  60533 Cd274 Related reagents	
Synonyms	B7h1, Pdcd1l1, Pdcd1lg1, Pdl1	
RRID	AB_1125243	
Fusion Partners	Spleen cells from immunized SD rats were fuzed 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).	ļ;
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10 <sup>6</sup> 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	<ol> <li>Kanai, T. <i>et al.</i> (2003) Blockade of B7-H1 suppresses the development of chronic intestinal inflammation. <u>J Immunol. 171 (8): 4156-63.</u></li> <li>Yamazaki, T. <i>et al.</i> (2002) Expression of programmed death 1 ligands by murine T cell and APC. <u>J Immunol. 169 (10): 5538-45.</u></li> <li>Furuhashi, K. <i>et al.</i> (2011) Mouse Lung CD103<sup>+</sup> and CD11bhigh dendritic cells preferentially induce distinct CD4<sup>+</sup> T cell responses. <u>Am J Respir Crit Care Med 181: 2010: A3795</u></li> </ol>	S

- 4. Silk, K.M. *et al.* (2012) Rapamycin conditioning of dendritic cells differentiated from human ES cells promotes a tolerogenic phenotype. J Biomed Biotechnol. 2012: 172420.
- 5. Haile, S.T. *et al.* (2013) Soluble CD80 Restores T Cell Activation and Overcomes Tumor Cell Programmed Death Ligand 1-Mediated Immune Suppression. <u>J Immunol. 191:</u> 2829-36.
- 6. Lopez-Medina, M. *et al.* (2015) *Salmonella* induces PD-L1 expression in B cells. Immunol Lett. pii: S0165-2478(15)30018-3.
- 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. <u>PLoS One.</u> 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. <u>J Immunol. 186 (10): 5993-6003.</u>
- 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. <u>Cancer Immunol Immunother</u>. 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. <u>Cell Commun</u> 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. <u>Scand J Immunol. 77 (4): 246-54.</u>

#### **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. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee

18 months from date of despatch.

Health And Safety Information

Material Safety Datasheet documentation #10040 available at:

10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf

Regulatory

For research purposes only

# Related Products

#### **Recommended Secondary Antibodies**

Rabbit Anti Rat IgG (STAR17...) <u>FITC</u>
Goat Anti Rat IgG (STAR69...) <u>FITC</u>

Goat Anti Rat IgG (STAR131...) Alk. Phos., Biotin

Goat Anti Rat IgG (STAR73...)

Rabbit Anti Rat IgG (STAR21...)

HRP

Rabbit Anti Rat IgG (STAR16...) <u>DyLight®800</u>
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...) DyLight®800

Goat Anti Rat IgG (STAR72...)

**HRP** 

# **Recommended Negative Controls**

# RAT IgG2a NEGATIVE CONTROL (MCA1212)

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 Worldwide
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 Europe
 Tel: +49 (0) 89 8090 95 21

 America
 Fax: +1 919 878 3751
 Fax: +44 (0)1865 852 739
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