

## Datasheet: MCA2628A647

<b>Description:</b>	MOUSE ANTI HUMAN CD279:Alexa Fluor® 647
<b>Specificity:</b>	CD279
<b>Other names:</b>	PD-1
<b>Format:</b>	ALEXA FLUOR® 647
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MIH4
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			

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.

<b>Target Species</b>	Human		
<b>Product Form</b>	Purified IgG conjugated to Alexa Fluor® 647 - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	Alexa Fluor®647	650	665
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> ) 1% Bovine Serum Albumin		
<b>Approx. Protein Concentrations</b>	IgG concentration 0.05mg/ml		

<b>Immunogen</b>	Human CD279 - transfected L cells.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">Q15116</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">5133</a>    PDCD1    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	PD1
<b>RRID</b>	AB_1220371
<b>Fusion Partners</b>	Spleen cells from immunised C3H mice were fused with cells of the P3U1 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human CD279 antibody, clone MIH4</b> detects CD279, a co-stimulatory molecule also known as programmed cell death-1 (PD-1). CD279 is a ~50-55 kDa membrane protein which is a member of the CD28 family, and functions mainly as a negative regulator of T-cell activation. CD279 has two specific ligands; CD274 (PD-L1) and CD273 (PD-L2), and their interaction is key in the balance between stimulatory and inhibitory signals needed for effective immune responses to microbes and self-tolerance. CD279 is inducibly expressed by T-cells, B-cells, NK-T-cells and monocytes upon activation.</p> <p>Loss of CD279 function has been associated with a number of autoimmune diseases, including rheumatoid arthritis, type I diabetes and ankylosing spondylitis. Recent studies suggest that CD279 could be targeted therapeutically in the treatment of HIV infection to reduce T-cell exhaustion.</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label $1 \times 10^6$ cells in 100ul.
<b>References</b>	1. Kanai, T. <i>et al.</i> (2003) Blockade of B7-H1 suppresses the development of chronic intestinal inflammation. <a href="#">J Immunol. 171 (8): 4156-63.</a>
<b>Further Reading</b>	<p>1. Freeman, G.J. <i>et al.</i> (2006) Reinvigorating exhausted HIV-specific T cells via PD-1-PD-1 ligand blockade. <a href="#">J Exp Med. 203 (10): 2223-7.</a></p> <p>2. Keir, M.E. <i>et al.</i> (2007) PD-1 and its ligands in T-cell immunity. <a href="#">Curr Opin Immunol. 19 (3): 309-14.</a></p>
<b>Storage</b>	<p>Store at +4°C or at -20°C if preferred.</p> <p>Storage in frost-free freezers is not recommended.</p> <p>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.</p>
<b>Guarantee</b>	18 months from date of despatch.

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**Health And Safety Information** Material Safety Datasheet documentation #10041 available at: 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

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**Regulatory** For research purposes only

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## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA928A647\)](#)

### Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto:antibody_sales_us@bio-rad.com)

**Worldwide**

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: [antibody\\_sales\\_uk@bio-rad.com](mailto:antibody_sales_uk@bio-rad.com)

**Europe**

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

Email: [antibody\\_sales\\_de@bio-rad.com](mailto:antibody_sales_de@bio-rad.com)

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