

## Datasheet: MCA2628GA

<b>Description:</b>	MOUSE ANTI HUMAN CD279
<b>Specificity:</b>	CD279
<b>Other names:</b>	PD-1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MIH4
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.1 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 [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			1/10 - 1/200
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
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.

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - liquid
<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> )
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0mg/ml
<b>Immunogen</b>	Human CD279 - transfected L cells.

**External Database  
Links**

**UniProt:**

[Q15116](#)   [Related reagents](#)

**Entrez Gene:**

[5133](#)   PDCD1   [Related reagents](#)

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**Synonyms**

PD1

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**Fusion Partners**

Spleen cells from immunised C3H mice were fused with cells of the P3U1 myeloma cell line.

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**Specificity**

**Mouse anti Human CD279 antibody, clone MIH4** 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.

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.

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**Flow Cytometry**

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

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**Histology Positive  
Control Tissue**

Tonsil

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**References**

1. Kanai, T. *et al.* (2003) Blockade of B7-H1 suppresses the development of chronic intestinal inflammation. [J Immunol. 171 \(8\): 4156-63.](#)

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**Further Reading**

1. Freeman, G.J. *et al.* (2006) Reinvigorating exhausted HIV-specific T cells via PD-1-PD-1 ligand blockade. [J Exp Med. 203 \(10\): 2223-7.](#)  
2. Keir, M.E. *et al.* (2007) PD-1 and its ligands in T-cell immunity. [Curr Opin Immunol. 19 \(3\): 309-14.](#)

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**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.

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**Shelf Life**

18 months from date of despatch.

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**Health And Safety  
Information**

Material Safety Datasheet documentation #10040 available at:  
10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...) [RPE](#)  
Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)  
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight@488](#), [DyLight@549](#),  
[DyLight@649](#), [DyLight@680](#), [DyLight@800](#),  
[FITC](#), [HRP](#)  
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)  
Goat Anti Mouse IgG (STAR77...) [HRP](#)  
Rabbit Anti Mouse IgG (STAR12...) [RPE](#)  
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)  
Rabbit Anti Mouse IgG (STAR8...) [DyLight@800](#)  
Goat Anti Mouse IgG (STAR70...) [FITC](#)  
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)  
Human Anti Mouse IgG1 (HCA036...) [HRP](#)

## **Recommended Negative Controls**

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

## **Recommended Useful Reagents**

[HISTAR DETECTION SYSTEM \(STAR3000A\)](#)

[HISTAR DETECTION SYSTEM \(STAR3000B\)](#)

[HISTAR DETECTION SYSTEM \(STAR3000C\)](#)

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