

Datasheet: MCA2628

Description:	MOUSE ANTI HUMAN CD279
Specificity:	CD279
Other names:	PD-1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	MIH4
Isotype:	IgG1
Quantity:	0.2 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.

	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.

Target Species	Human
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Human CD279 - transfected L cells.

**External Database
Links**

UniProt:

[Q15116](#) [Related reagents](#)

Entrez Gene:

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

Synonyms

PD1

Fusion Partners

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

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.

Flow Cytometry

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

**Histology Positive
Control Tissue**

Tonsil

References

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

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.](#)

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.

Shelf Life

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

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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