

# PD-1/CD279 Monoclonal antibody

 Catalog Number: 66220-1-Ig 32 Publications

## Basic Information

<b>Catalog Number:</b> 66220-1-Ig	<b>GenBank Accession Number:</b> BC074740	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 150ul , Concentration: 1500 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 5133	<b>CloneNo.:</b> 4H4D1
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> Q15116	<b>Recommended Dilutions:</b> WB 1:5000-1:50000 IHC 1:2000-1:8000 IF 1:200-1:800
<b>Isotype:</b> IgG2b	<b>Full Name:</b> programmed cell death 1	
<b>Immunogen Catalog Number:</b> AG12470	<b>Calculated MW:</b> 288 aa, 32 kDa	
	<b>Observed MW:</b> 32 kDa, 47-55 kDa	

## Applications

**Tested Applications:**  
WB, IF, FC, IHC, ELISA

**Cited Applications:**  
WB, IF, FC, IHC

**Species Specificity:**  
human, rat, mouse, pig

**Cited Species:**  
human, rat, mouse

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

**Positive Controls:**

**WB :** RAW 264.7 cells, human lymph node tissue, rat spleen tissue, mouse thymus tissue, Jurkat cells, MOLT-4 cells, THP-1 cells, CTLL-2 cells, pig thymus tissue

**IHC :** human tonsillitis tissue, human lymphoma tissue

**IF :** human tonsillitis tissue, human lymphoma tissue

## Background Information

Programmed cell death 1 (PD-1, also known as CD279) is an immunoinhibitory receptor that belongs to the CD28/CTLA-4 subfamily of the Ig superfamily. It is a 288 amino acid (aa) type I transmembrane protein composed of one Ig superfamily domain, a stalk, a transmembrane domain, and an intracellular domain containing an immunoreceptor tyrosine-based inhibitory motif (ITIM) as well as an immunoreceptor tyrosine-based switch motif (ITSM) (PMID: 18173375). PD-1 is expressed during thymic development and is induced in a variety of hematopoietic cells in the periphery by antigen receptor signaling and cytokines (PMID: 20636820). Engagement of PD-1 by its ligands PD-L1 or PD-L2 transduces a signal that inhibits T-cell proliferation, cytokine production, and cytolytic function (PMID: 19426218). It is critical for the regulation of T cell function during immunity and tolerance. Blockade of PD-1 can overcome immune resistance and also has been shown to have antitumor activity (PMID: 22658127; 23169436). The calculated molecular weight of PD-1 is 32 kDa. It has been reported that PD-1 is heavily glycosylated and migrates with an apparent molecular mass of 47-55 kDa on SDS-PAGE (PMID: 8671665; 17640856; 17003438).

## Notable Publications

Author	Pubmed ID	Journal	Application
Weili Xu	34600949	Immunol Lett	IF
Christian Spurny	28868758	Pediatr Blood Cancer	IHC
Yulin Deng	36505457	Front Immunol	WB

## Storage

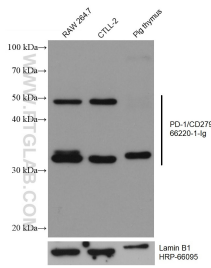
**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.  
Aliquoting is unnecessary for -20°C storage

**\*\*\* 20ul sizes contain 0.1% BSA**

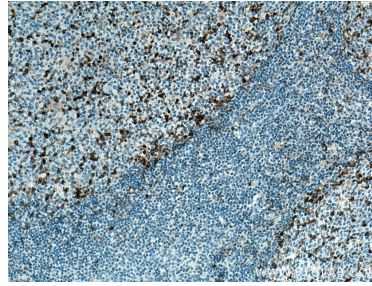
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)      E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

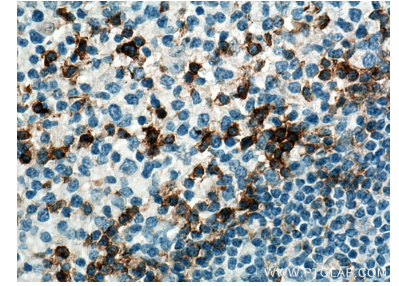
## Selected Validation Data



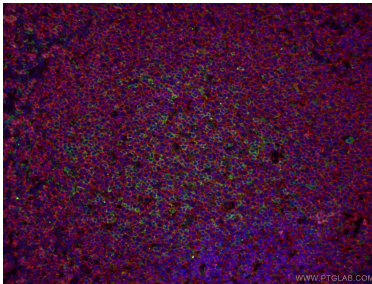
Various lysates were subjected to SDS PAGE followed by western blot with 66220-1-Ig (PD-1/CD279 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. The membrane was stripped and reblotted with HRP-conjugated Lamin B1 Monoclonal antibody (HRP-66095) as loading control.



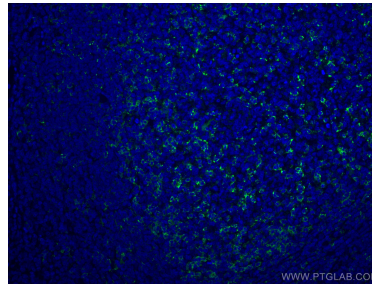
Immunohistochemical analysis of paraffin-embedded human tonsillitis tissue slide using 66220-1-Ig (PD-1/CD279 antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



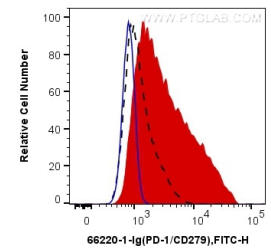
Immunohistochemical analysis of paraffin-embedded human tonsillitis tissue slide using 66220-1-Ig (PD-1/CD279 antibody) at dilution of 1:4000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed human tonsillitis tissue using PD-1/CD279 mouse mAb (66220-1-Ig) at dilution of 1:50 and CD20 rabbit pAb (24828-1-AP) at dilution of 1:50, further stained with Alexa Fluor 488-conjugated AffiniPure Goat Anti-Mouse IgG(H+L) for 66220-1-Ig, and Alexa Fluor 594-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) for 24828-1-AP.



Immunofluorescent analysis of (4% PFA) fixed human tonsillitis tissue using PD-1/CD279 antibody (66220-1-Ig, Clone: 4H4D1) at dilution of 1:400 and CoraLite@488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).



1x10<sup>6</sup> unstimulated (dashed line) or PMA and ionomycin treated (red) MOLT-4 cells were surface stained with 0.2 ug Anti-Human PD-1/CD279 (66220-1-Ig, Clone: 4H4D1) and CoraLite@488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L) at dilution 1:1000, or 0.2 ug isotype control antibody (blue, solid line). Cells were not fixed.