

PD-1/CD279 Monoclonal antibody

Catalog Number: 66220-1-Ig **31 Publications**

Basic Information

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

Applications

Tested Applications: FC, IF, IHC, WB, ELISA	Positive Controls:
Cited Applications: FC, IF, IHC, WB	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
Species Specificity: human, rat, mouse, pig	IHC : human tonsillitis tissue, human lymphoma tissue
Cited Species: human, rat, mouse	IF : human tonsillitis tissue, human lymphoma tissue

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

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

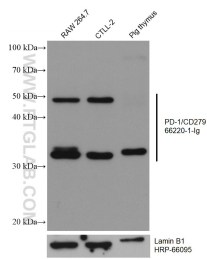
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

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

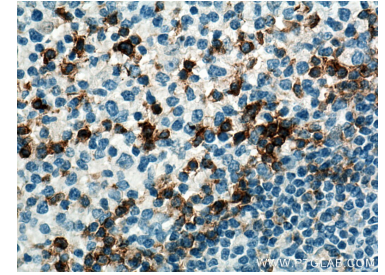
Selected Validation Data



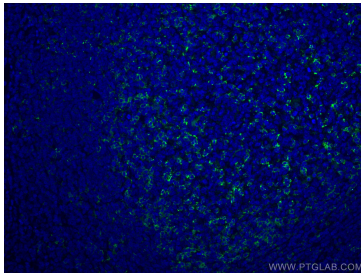
Various lysates were subjected to SDS PAGE followed by western blot with 66220-1-Ig (PD-1/CD279 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. The membrane was stripped and reblotted with HRP-conjugated Lamin B1 Monoclonal antibody (HRP-66095) as loading control.



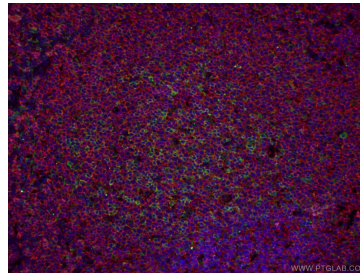
Immunohistochemical analysis of paraffin-embedded human tonsillitis tissue slide using 66220-1-Ig (PD-1/CD279 antibody) at dilution of 1:4000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



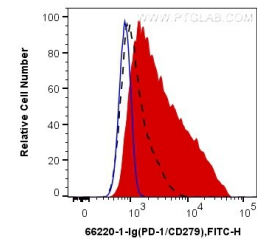
Immunohistochemical analysis of paraffin-embedded human tonsillitis tissue slide using 66220-1-Ig (PD-1/CD279 antibody) at dilution of 1:4000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



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



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.



1X10⁶ 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.