For Research Use Only

PD-1/CD279 Monoclonal antibody

Catalog Number:66220-1-Ig Featured Product 62 Publications

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Basic Information

Catalog Number:
66220-1-Ig

Size:
150ul , Concentration: 1500 ug/ml by Nanodrop;

Source:
Mouse

Isotype:
IgG2b

Immunogen Catalog Number:
AG12470

GenBank Accession Number:
BC074740

GeneID (NCBI):
5133

UNIPROT ID:
Q15116

Full Name:
programmed cell death 1

Calculated MW:
288 aa, 32 kDa

Observed MW:
32 kDa, 47-55 kDa

Purification Method:
Protein A purification

CloneNo.:
4H4D1

Recommended Dilutions:
WB: 1:5000-1:50000
IHC: 1:2000-1:8000
IF-P: 1:200-1:800

Applications

Tested Applications:
WB, IHC, IF-P, ELISA

Cited Applications:
WB, IHC, IF, IP

Species Specificity:
human, mouse, rat, pig

Cited Species:
human, mouse, rat

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-P : 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, pH7.3
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:
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E: proteintech@ptglab.com
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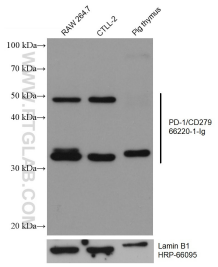
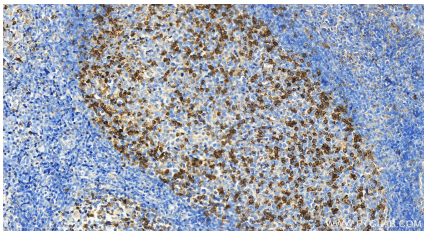
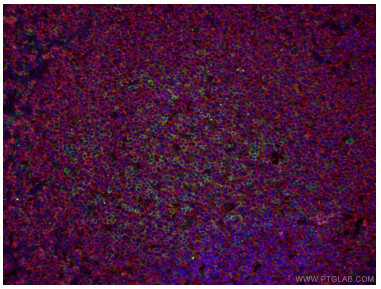
Selected Validation Data



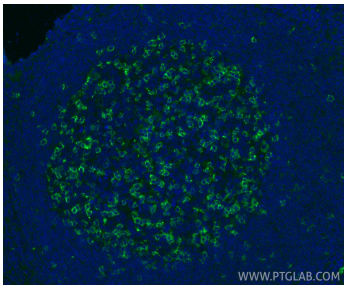
Various lysates were subjected to SDS PAGE followed by western blot with 66220-1-Ig (PD-1/CD279 antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours. The membrane was stripped and reblotted with HRP-conjugated Lamin B1 Monoclonal antibody (HRP-66095) as loading control.



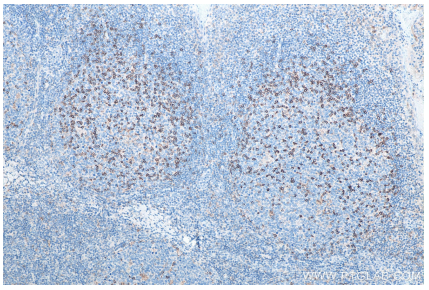
Immunohistochemical analysis of paraffin-embedded human tonsillitis tissue slide using 66220-1-Ig (PD-1/CD279 antibody) at dilution of 1:4000 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



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 paraffin-embedded human tonsillitis tissue using PD-1/CD279 antibody (66220-1-Ig, Clone: 4H4D1) at dilution of 1:400 and CoraLite®488-Conjugated Goat Anti-Mouse IgG(H+L) (SA00013-1). 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 1:20000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).