

## ARG66243 anti-CD279 / PD-1 antibody [SQab1732]

Package: 100 µl, 50 µl  
Store at: -20°C

### Summary

Product Description	Recombinant Rabbit Monoclonal antibody [SQab1732] recognizes CD279 / PD-1
Tested Reactivity	Hu
Tested Application	FACS, ICC/IF, IHC-P, IP
Host	Rabbit
Clonality	Monoclonal
Clone	SQab1732
Isotype	IgG
Target Name	CD279 / PD-1
Species	Human
Immunogen	Recombinant full length protein of Human PD-1. The immunogen contains the specific extracellular domain of Human PD-1 (Leu25 - Gln167).
Conjugation	Un-conjugated
Alternate Names	hPD-I; CD279; PD-1; Protein PD-1; CD antigen CD279; PD1; hSLE1; SLEB2; Programmed cell death protein 1; hPD-1

### Application Instructions

Application table	Application	Dilution
	FACS	1:50 - 1:200
	ICC/IF	1:2000 - 1:10000
	IHC-P	1:100 - 1:200
	IP	1:50
Application Note	IHC-P: Antigen Retrieval: Boil tissue section in Tris/EDTA buffer (pH 9.0). * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

### Properties

Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS, 0.01% Sodium azide, 40% Glycerol and 0.05% BSA.
Preservative	0.01% Sodium azide
Stabilizer	40% Glycerol and 0.05% BSA
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw

cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

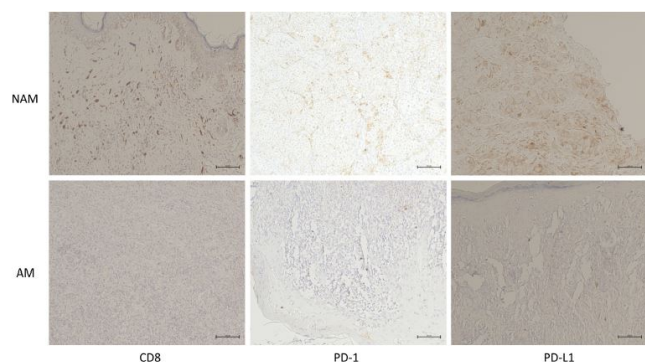
#### Note

For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

Gene Symbol	PDCD1
Gene Full Name	programmed cell death 1
Background	<p>CD279 / PD-1 is a cell surface membrane protein of the immunoglobulin superfamily. This protein is expressed in pro-B-cells and is thought to play a role in their differentiation. In mice, expression of this gene is induced in the thymus when anti-CD3 antibodies are injected and large numbers of thymocytes undergo apoptosis. Mice deficient for this gene bred on a BALB/c background developed dilated cardiomyopathy and died from congestive heart failure. These studies suggest that this gene product may also be important in T cell function and contribute to the prevention of autoimmune diseases. [provided by RefSeq, Jul 2008]</p>
Function	<p>CD279 / PD-1 is an inhibitory receptor on antigen activated T-cells. It plays a critical role in induction and maintenance of immune tolerance to self (PubMed:21276005). Delivers inhibitory signals upon binding to ligands CD274/PDCD1L1 and CD273/PDCD1LG2 (PubMed:21276005). Following T-cell receptor (TCR) engagement, PDCD1 associates with CD3-TCR in the immunological synapse and directly inhibits T-cell activation. Suppresses T-cell activation through the recruitment of PTPN11/SHP-2: following ligand-binding, PDCD1 is phosphorylated within the ITSM motif, leading to the recruitment of the protein tyrosine phosphatase PTPN11/SHP-2 that mediates dephosphorylation of key TCR proximal signaling molecules, such as ZAP70, PRKCQ/PKCtheta and CD247/CD3zeta.</p> <p>The PDCD1-mediated inhibitory pathway is exploited by tumors to attenuate anti-tumor immunity and escape destruction by the immune system, thereby facilitating tumor survival (PubMed:28951311). The interaction with CD274/PDCD1L1 inhibits cytotoxic T lymphocytes (CTLs) effector function (PubMed:28951311). The blockage of the PDCD1-mediated pathway results in the reversal of the exhausted T-cell phenotype and the normalization of the anti-tumor response, providing a rationale for cancer immunotherapy (PubMed:22658127, PubMed:25034862, PubMed:25399552). [UniProt]</p>
Highlight	<p>Related products: <a href="#">PD-1 antibodies</a>; <a href="#">PD-1 ELISA Kits</a>; <a href="#">PD-1 Duos / Panels</a>; <a href="#">Anti-Rabbit IgG secondary antibodies</a>;</p> <p>Related news: <a href="#">Cancer Pathology Markers (SQ clones)</a> <a href="#">The best solution for PD-1/PD-L1 research</a> <a href="#">Examining CTL/NK-mediated cytotoxicity by ELISA</a></p>
Calculated Mw	32 kDa

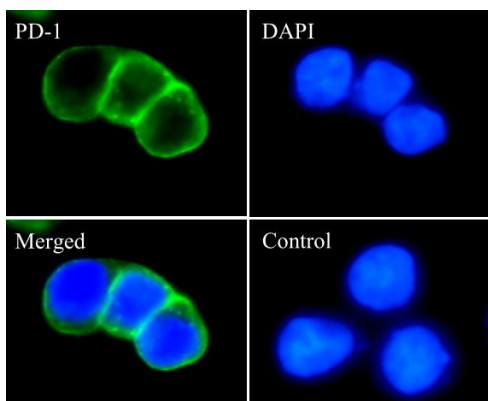
## Images



ARG66243 anti-CD279 / PD-1 antibody [SQab1732] IHC-P image

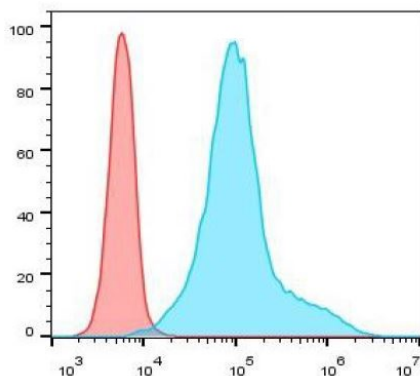
Immunohistochemistry: Human nonacral melanoma and acral melanoma tumor stained with [ARG66628 anti-CD8 antibody \[SQab19146\]](#), ARG66243 anti-CD279 / PD-1 antibody [SQab1732] and [ARG65862 anti-CD274 / PD-L1 antibody \[SQab1716\]](#).

From Yu-Jen Chiu et al. J Dermatol. (2024), [doi: 10.1111/1346-8138.17187](#), Fig. 7.



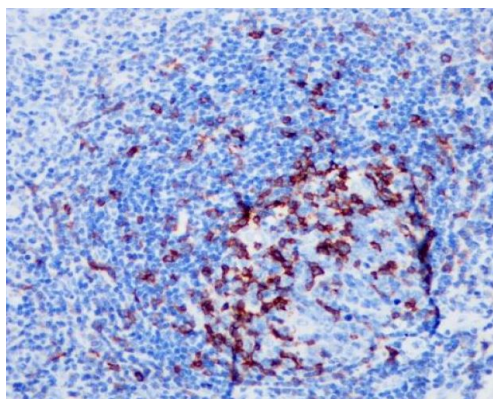
#### ARG66243 anti-CD279 / PD-1 antibody [SQab1732] ICC/IF image

Immunofluorescence: 293 cells transfected with PD-1 gene, fixed with 4% paraformaldehyde for 30 min at RT, permeabilized with 0.1% Triton X-100 for 10 min at RT then blocked with 10% Goat serum for half an hour at room temperature. Samples were stained with ARG66243 anti-CD279 / PD-1 antibody [SQab1732] (green) at 1:10000 and 4°C. DAPI (blue) was used as the nuclear counter stain. Control: PBS and secondary antibody.



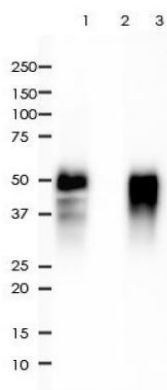
#### ARG66243 anti-CD279 / PD-1 antibody [SQab1732] FACS image

Flow Cytometry: 293 cells transfected with PD-1 gene. The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% TritonX-100 for 15 min. The cells were then stained with ARG66243 anti-CD279 / PD-1 antibody [SQab1732] (blue) at 1:200 dilution in 1x PBS/1% BSA for 30 min at room temperature, followed by Alexa Fluor® 488 labelled secondary antibody. Unlabelled sample (red) was used as a control.



#### ARG66243 anti-CD279 / PD-1 antibody [SQab1732] IHC-P image

Immunohistochemistry: Formalin-fixed and paraffin-embedded Human lung tonsil tissue stained with ARG66243 anti-CD279 / PD-1 antibody [SQab1732] at 1:200. Antigen Retrieval: Boil tissue section in Tris/EDTA buffer (pH 9.0).



#### ARG66243 anti-CD279 / PD-1 antibody [SQab1732] IP image

Immunoprecipitation: 0.2 mg of 293 whole cell lysate (transfected with PD-1 gene) was immunoprecipitated (1:50 dilution) by ARG66243 anti-CD279 / PD-1 antibody [SQab1732] and then stained with anti-CD279 / PD-1 antibody.

Lane 1: Immunoprecipitation in 293 whole cell lysate (transfected with PD-1 gene)  
 Lane 2: PBS instead of Primary Ab in 293 whole cell lysate (transfected with PD-1 gene)  
 Lane 3: 293 whole cell lysate (transfected with PD-1 gene), 2 µg (input)