

**ARG57875**  
anti-CD279 / PD-1 antibody [J43.1]Package: 50 µg  
Store at: -20°C

### Summary

Product Description	Hamster Monoclonal antibody [J43.1] recognizes CD279 / PD-1
Tested Reactivity	Ms
Tested Application	FACS, FuncSt, IHC-Fr, IP
Specificity	The antibody specifically reacts with mouse CD279, also known as PD-1 (programmed death-1), a 50-55 kDa glycoprotein of the Ig superfamily.
Host	Hamster
Clonality	Monoclonal
Clone	J43.1
Isotype	IgG
Target Name	CD279 / PD-1
Species	Mouse
Immunogen	Mouse CD279 / PD-1.
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	Assay-dependent
	FuncSt	Assay-dependent
	IHC-Fr	Assay-dependent
	IP	Assay-dependent
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

### Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.2), 0.09% Sodium azide, may contain carrier protein/stabilizer.
Preservative	0.09% Sodium azide
Concentration	0.5 mg/ml

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 or below. 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	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]
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-Hamster IgG secondary antibodies</a>;</p> <p>Related news:  <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
Cellular Localization	Membrane