

ARG58001 anti-CD279 / PD-1 antibody (PE)

Package: 50 µg
Store at: 4°C

Summary

Product Description	PE-conjugated Hamster Monoclonal antibody [J43.1] recognizes CD279 / PD-1
Tested Reactivity	Ms
Tested Application	FACS
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
Conjugation	PE
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
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) and 0.09% Sodium azide with carrier protein/stabilizer.
Preservative	0.09% Sodium azide
Stabilizer	carrier protein/stabilizer
Concentration	0.2 mg/ml
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before 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	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. 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]
Highlight	Related products: PD-1 antibodies; PD-1 ELISA Kits; PD-1 Duos / Panels; Anti-Hamster IgG secondary antibodies; Related news: The best solution for PD-1/PD-L1 research Examining CTL/NK-mediated cytotoxicity by ELISA
Calculated Mw	32 kDa
Cellular Localization	Membrane