ARG63796
anti-CD279 / PD-1 antibody

Package: 100 µg
Store at: -20°C

Summary

Product Description	Goat Polyclonal antibody recognizes CD279 / PD-1
Tested Reactivity	Hu
Predict Reactivity	Ms, Rat, Cow, Dog
Tested Application	FACS
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Target Name	CD279 / PD-1
Species	Human
Immunogen	C-GELDFQWREKTPE
Conjugation	Un-conjugated
Alternate Names	hPD-l; 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	10 µg/ml

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.
Buffer	Tris saline (pH 7.3), 0.02% Sodium azide and 0.5% BSA
Preservative	0.02% Sodium azide
Stabilizer	0.5% BSA
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

|	
Database links	GeneID: 5133 Human
	Swiss-port # Q15116 Human
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-Goat IgG secondary antibodies; Related news: The best solution for PD-1/PD-L1 research Examining CTL/NK-mediated cytotoxicity by ELISA
Research Area	Cell Biology and Cellular Response antibody; Cell Death antibody; Immune System antibody
Calculated Mw	32 kDa
Cellular Localization	Membrane

Images
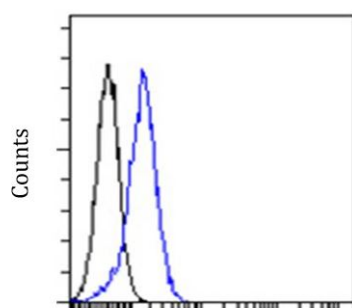
ARG63796 anti-CD279 / PD-1 antibody FACS image

Flow Cytometry: Paraformaldehyde-fixed Jurkat cells, permeabilized with 0.5% Triton. Cells were stained with ARG63796 anti-CD279 / PD-1 antibody (blue) at 10 µg/ml dilution for 1 hour, followed by incubation with Alexa Fluor® 488 labelled secondary antibody. IgG control: Unimmunized Goat IgG (black) followed by incubation with Alexa Fluor® 488 labelled secondary antibody.