ARG42306
anti-CD279 / PD-1 antibody [EH12.2H7] (APC)

Package: 50 tests
Store at: 4°C

Summary

Product Description	APC-conjugated Mouse Monoclonal antibody [EH12.2H7] recognizes CD279 / PD-1
Tested Reactivity	Hu, NHuPrm
Tested Application	FACS
Specificity	The mouse monoclonal antibody EH12.2H7 recognizes an extracellular epitope of CD279 / PD-1 (programmed cell death 1), a 55 kDa type I transmembrane protein expressed above all during T cell development, on activated T cells, activated B cells, and activated monocytes.
Host	Mouse
Clonality	Monoclonal
Clone	EH12.2H7
Isotype	IgG1, kappa
Target Name	CD279 / PD-1
Species	Human
Immunogen	Human CD279.
Conjugation	APC
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 µl / 100 µl of whole blood or 10^6 cells

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

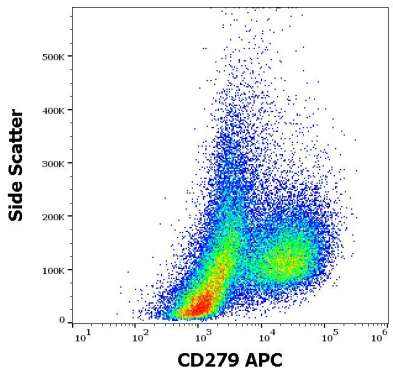
Properties

Form	Liquid
Purification	Purified
Buffer	PBS and 15 mM Sodium azide.
Preservative	15 mM Sodium azide
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.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

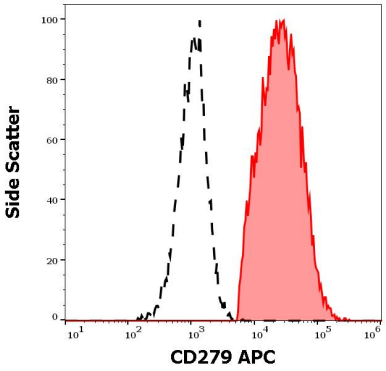
Gene Symbol	PDCD1
Gene Full Name	programmed cell death 1
Background	This gene encodes a cell surface membrane protein of the immunoglobulin superfamily. This protein is expressed in pro-B-cells and is thought to play a role in their differentiation. In mice, expression of this gene is induced in the 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	Inhibitory receptor on antigen activated T-cells that 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 (By similarity). 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 (By similarity). 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-Mouse IgG secondary antibodies; Related news: Examining CTL/NK-mediated cytotoxicity by ELISA
Calculated Mw	32 kDa
Cellular Localization	Membrane; Single-pass type I membrane protein. [UniProt]

Images



ARG42306 anti-CD279 / PD-1 antibody [EH12.2H7] (APC) FACS image

Flow Cytometry: Human PHA stimulated peripheral blood mononuclear cells stained with ARG42306 anti-CD279 / PD-1 antibody [EH12.2H7] (APC) at 10 µl / 10^6 cells in 100 µl of cell suspension.



ARG42306 anti-CD279 / PD-1 antibody [EH12.2H7] (APC) FACS image

Flow Cytometry: Separation of Human CD279 positive cells (red-filled) from cellular debris (black-dashed). Human PHA stimulated peripheral blood mononuclear cells stained with ARG42306 anti-CD279 / PD-1 antibody [EH12.2H7] (APC) at 10 µl / 10^6 cells in 100 µl of cell suspension.