

ARG11041 anti-CD279 / PD-1 antibody [7G12]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [7G12] recognizes CD279 / PD-1
Tested Reactivity	Hu
Tested Application	WB, sELISA
Specificity	Reactive with recombinant human programmed cell death-1 (PD-1). Reactivity with natural PD-1 has not been evaluated.
Host	Mouse
Clonality	Monoclonal
Clone	7G12
Isotype	IgG1, kappa
Target Name	CD279 / PD-1
Species	Human
Immunogen	40 kDa recombinant Human 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
	WB	Assay-dependent
	sELISA	Assay-dependent
Application Note	sELISA: Recommended pairs (capture - detection): ARG11038 anti-CD279 / PD-1 antibody [7C9] - ARG11041 anti-CD279 / PD-1 antibody [7G12] * 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 G.
Buffer	PBS (pH 7.2)
Concentration	1 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.

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: PD-1 antibodies; PD-1 ELISA Kits; PD-1 Duos / Panels; Anti-Mouse IgG secondary antibodies;</p> <p>Related news: The best solution for PD-1/PD-L1 research Examining CTL/NK-mediated cytotoxicity by ELISA</p>
Calculated Mw	32 kDa