DATASHEET

PD-1 (CD279) Mouse Monoclonal Antibody(RMP1-14)

CAT. NO. ARA6410

KEY FEATURES

Target	PD-1 (CD279)	Source / Host	Mouse
Reactivity	Mouse	Clonality	Monoclonal
Applications	InVivo	Storage	-20°C

BACKGROUND

The RMP1-14 monoclonal antibody reacts with mouse PD-1 (programmed death-1) also known as CD279. PD-1 is a 50-55 kDa cell surface receptor encoded by the Pdcd1 gene that belongs to the CD28 family of the Ig superfamily. PD-1 is transiently expressed on CD4 and CD8 thymocytes as well as activated T and B lymphocytes and myeloid cells. PD-1 expression declines after successful elimination of antigen. Additionally, Pdcd1 mRNA is expressed in developing B lymphocytes during the pro-B-cell stage. PD-1's structure includes a ITIM (immunoreceptor tyrosine-based inhibitory motif) suggesting that PD-1 negatively regulates TCR signals. PD-1 signals via binding its two ligands, PD-L1 and PD-L2 both members of the B7 family. Upon ligand binding, PD-1 signaling inhibits T-cell activation, leading to reduced proliferation, cytokine production, and T-cell death. Additionally, PD-1 is known to play key roles in peripheral tolerance and prevention of autoimmune disease in mice as PD-1 knockout animals show dilated cardiomyopathy, splenomegaly, and loss of peripheral tolerance. Induced PD-L1 expression is common in many tumors including squamous cell carcinoma, colon adenocarcinoma, and breast adenocarcinoma. PD-L1 overexpression results in increased resistance of tumor cells to CD8 T cell mediated lysis. In mouse models of melanoma, tumor growth can be transiently arrested via treatment with antibodies which block the interaction between PD-L1 and its receptor PD-1. For these reasons anti-PD-1 mediated immunotherapies are currently being explored as cancer treatments. Like the J43 antibody the RMP1-14 antibody has been shown to block the binding of both mouse PD-L1-Ig and mouse PD-L2-Ig to PD-1.

APPLICATION

*Results are sample-specific. Please refer to your local assay conditions and test parameters for reference.

PRODUCT OVERVIEW

Isotype	Rat IgG2a, κ
Recommended Isotype Control	Rat IgG2a isotype control, anti-trinitrophenol
Recommended Dilution Buffer	pH 7.0 Dilution Buffer
Immunogen	Syrian Hamster BKH cells transfected with mouse PD-1 cDNA
Reported Applications	in vivo blocking of PD-1/PD-L signaling
Form	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin	<2EU/mg (<0.002EU/μg) Determined by LAL gel clotting assay
Purification	Protein G
Sterility	0.2 μM filtration
Production	Purified from cell culture supernatant in an animal-free facility
Molecular Weight	150 kDa

*AREX continuously optimizes our products. Webpage content may not reflect the latest updates. For inquiries, please contact info@arexbio.com or your local distributor.

*Clone Number, Reactivity, Source/Host and Clonality can be found in the product name and Key Features section above.

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STORAGE

Shipped at 4℃. Store at -20℃ for one year. Avoid repeated freeze/thaw cycles.

NOTE

For Research Use Only. Not for diagnostic, therapeutics, prophylactic or in vivo use.

More information: www.arexbio.com