## **R**DSYSTEMS a biotechne brand

# Human/Cynomolgus Monkey PD-1 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2515B 0

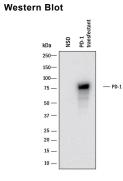
Catalog	Number:	MAB1047	

DESCRIPTION	
Species Reactivity	Human/Cynomolgus Monkey
Specificity	Detects human and cynomolgus monkey PD-1 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2515B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Human embryonic kidney cell HEK293-derived cynomolgus monkey PD-1 Leu25-Gln167 Accession # NP_001271065.1
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

### APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.		
	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below

### DATA



Detection of Human PD-1 by Western Blot. Western blot shows lysates of NS0 mouse myeloma cell line mock transfected or transfected with human PD-1. PVDF membrane was probed with 0.5 µg/mL of Rabbit Anti-Human/Cynomolgus Monkey PD-1 Monoclonal Antibody (Catalog # MAB10470) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # Catalog # HAF008). A specific band was detected for PD-1 at approximately 75 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND	TORAGE
Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
	<ul> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> </ul>
	<ul> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> </ul>

• 6 months, -20 to -70 °C under sterile conditions after reconstitution.

Rev. 12/29/2020 Page 1 of 2



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# Human/Cynomolgus Monkey PD-1 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2515B Catalog Number: MAB10470

### BACKGROUND

Programmed Death-1 receptor (PD-1), also known as CD279, is type I transmembrane protein belonging to the CD28 family of immune regulatory receptors (1). Other members of this family include CD28, CTLA-4, ICOS, and BTLA (2-5). Mature Cynomolgus monkey PD-1 consists of a 148 amino acid (aa) extracellular region (ECD) with one immunoglobulin-like V-type domain, a 24 aa transmembrane domain, and a 95 aa cytoplasmic region. The Cynomolgus monkey PD-1 ECD shares 95% aa sequence identity with the human PD-1 ECD. The cytoplasmic tail contains two tyrosine residues that form the immunoreceptor tyrosine-based inhibitory motif (ITIM) and immunoreceptor tyrosine-based switch motif (ITSM) that are important for mediating PD-1 signaling. PD-1 acts as a monomeric receptor and interacts in a 1:1 stoichiometric ratio with its ligands PD-L1 and PD-L2 (6, 7). PD‑1 is expressed on activated T cells, B cells, monocytes, and dendritic cells while PD-L1 expression is constitutive on the same cells and also on nonhematopoietic cells such as lung endothelial cells and hepatocytes (8, 9). Ligation of PD-L1 with PD-1 induces co-inhibitory signals on T cells promoting their apoptosis, anergy, and functional exhaustion (10). Thus, the PD-1:PD-L1 interaction is a key regulator of the threshold of immune response and peripheral immune tolerance (11). Finally, blockade of the PD-1: PD-L1 interaction by either antibodies or genetic manipulation accelerates tumor eradication and shows potential for improving cancer immunotherapy (12, 13).

#### References:

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Rev. 12/29/2020 Page 2 of 2



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