RDSYSTEMS a biotechne brand

Human/Cynomolgus Monkey PD-1 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2515B 0

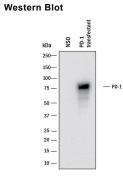
Catalog	Number:	MAB1047	

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.
	 12 months from date of receipt, -20 to -70 °C as supplied.
	 1 month, 2 to 8 °C under sterile conditions after reconstitution.

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

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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:

- 1. Ishida, Y. et al. (1992) EMBO J. 11:3887.
- 2. Sharpe, A.H. and G. J. Freeman (2002) Nat. Rev. Immunol. 2:116.
- 3. Coyle, A. and J. Gutierrez-Ramos (2001) Nat. Immunol. 2:203.
- 4. Nishimura, H. and T. Honjo (2001) Trends Immunol. 22:265.
- 5. Watanabe, N et al. (2003) Nat. Immunol. 4:670.
- 6. Zhang, X. et al. (2004) Immunity 20:337.
- 7. Lázár-Molnár, E. et al. (2008) Proc. Natl. Acad. Sci. USA 105:10483.
- 8. Nishimura, H et al. (1996) Int. Immunol. 8:773.
- 9. Keir, M.E. et al. (2008) Annu. Rev. Immunol. 26:677.
- 10. Butte, M.J. et al. (2007) Immunity 27:111.
- 11. Okazaki, T. et al. (2013) Nat. Immunol. 14:1212.
- 12. Iwai, Y. et al. (2002) Proc. Natl. Acad. Sci. USA 99: 12293.
- 13. Nogrady, B. (2014) Nature **513**:S10.

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