Revision 1

PD-1 (D3W4U) Rabbit mAb (Alexa Fluor® 488 Conjugate)

#15131 Store at +4C

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	H	Endogenous	Rabbit IgG	#Q15116	5133

Product Usage Information

Application	Dilution
Flow Cytometry (Fixed/Permeabilized)	1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

PD-1 (D3W4U) Rabbit mAb (Alexa Fluor® 488 Conjugate) recognizes endogenous levels of total PD-1 protein. This antibody binds the intracellular domain of human PD-1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala249 of human PD-1 protein.

Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated PD-1 (D3W4U) Rabbit mAb #15121.

Background

The programmed cell death 1 protein (PD-1, PDCD1, CD279) is a member of the CD28 family of immunoreceptors that regulate T cell activation and immune responses (1-3). The PD-1 protein contains an extracellular Ig V domain, a transmembrane domain, and a cytoplasmic tail that includes an immunoreceptor tyrosine-based inhibitory motif (ITIM) and an immunoreceptor tyrosine-based switch motif (ITSM). PD-1 is activated by the cell surface ligands PD-L1 and PD-L2 (4). Upon activation, PD-1 ITIM and ITSM phosphorylation leads to the recruitment of the protein tyrosine phosphatases SHP-1 and SHP-2, which suppress TCR signaling (5-7). In addition to activated T cells, PD-1 is expressed in activated B cells and monocytes, although its function in these cell types has not been fully characterized (8). The PD-1 pathway plays an important role in immune tolerance (3); however, research studies show that cancer cells often adopt this pathway to escape immune surveillance (9). Consequently, blockade of PD-1 and its ligands is proving to be a sound strategy for neoplastic intervention (10).

Background References

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7. Chemnitz, J.M. et al. (2004) *J Immunol* 173, 945-54.
8. Thibult, M.L. et al. (2013) *Int Immunol* 25, 129-37.
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Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human

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