Revision 9

#76733 Store at +4C

PD-1 (Intracellular Domain) (D7D5W) XP® Rabbit mAb (Alexa Fluor® 555 Conjugate)

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-F, IF-IC	M	Endogenous	Rabbit IgG	#Q02242	18566

Product Usage Information

Application	Dilution
Immunofluorescence (Frozen)	1:50
Immunofluorescence (Immunocytochemistry)	1:200 - 1:400

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 (Intracellular Domain) (D7D5W) XP® Rabbit mAb (Alexa Fluor® 555 Conjugate) recognizes endogenous levels of total PD-1 protein. PD-1 (Intracellular Domain) (D7D5W) XP® Rabbit mAb (Alexa Fluor® 555 Conjugate) #76733 non-specifically labels the crypts of small intestine by Immunofluorescence.

Species predicted to react based on 100% sequence homology

Rat, Hamster

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala242 of mouse PD-1 protein.

Product Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 555 fluorescent dye and tested in-house for direct immunofluorescent analysis in mouse tissue and cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated PD-1 (Intracellular Domain) (D7D5W) XP® Rabbit mAb #84651.

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

1. Ishida, Y. et al. (1992) *EMBO J* 11, 3887-95.
2. Shinohara, T. et al. (1994) *Genomics* 23, 704-6.
3. Nishimura, H. et al. (1999) *Immunity* 11, 141-51.
4. Freeman, G.J. et al. (2000) *J Exp Med* 192, 1027-34.
5. Yokosuka, T. et al. (2012) *J Exp Med* 209, 1201-17.
6. Sheppard, K.A. et al. (2004) *FEBS Lett* 574, 37-41.
7. Chemnitz, J.M. et al. (2004) *J Immunol* 173, 945-54.
8. Thibult, M.L. et al. (2013) *Int Immunol* 25, 129-37.
9. Dong, H. et al. (2002) *Nat Med* 8, 793-800.
10. Topalian, S.L. et al. (2012) *Curr Opin Immunol* 24, 207-12.

Species Reactivity

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

Applications Key

IF-F: Immunofluorescence (Frozen) **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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