



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

#61237 Store at +4C

PD-1 (Intracellular Domain) (D7D5W) XP[®] Rabbit mAb (Alexa Fluor[®] 647 Conjugate)

For Research Use Only. Not for Use in Diagnostic Procedures.

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

Product Usage Information

Application

Immunofluorescence (Frozen)
Immunofluorescence (Immunocytochemistry)

Dilution

1:100 - 1:200
1:100 - 1:200

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[®] 647 Conjugate) recognizes endogenous levels of total PD-1 protein. PD-1 (Intracellular Domain) (D7D5W) XP[®] Rabbit mAb (Alexa Fluor[®] 647 Conjugate) #61237 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.

Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor[®] 647 fluorescent dye and tested in-house for direct immunofluorescent analysis in mouse cells and tissues. 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

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

M: Mouse

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

XP is a registered trademark of Cell Signaling Technology, Inc.

This product is provided under an intellectual property license from Life Technologies Corporation. The transfer of this product is conditioned on the buyer using the purchased product solely in research conducted by the buyer, excluding contract research or any fee for service research, and the buyer must not (1) use this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; or (c) manufacturing or quality assurance or quality control, and/or (2) sell or transfer this product or its components for resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@lifetech.com.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.