



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

#8033 Store at -20C

USP1 (D37B4) Rabbit mAb

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

Applications: W, IP	Reactivity: H M Mk	Sensitivity: Endogenous	MW (kDa): 110	Source/Isotype: Rabbit IgG	UniProt ID: #O94782	Entrez-Gene Id: 7398
-------------------------------	------------------------------	-----------------------------------	-------------------------	--------------------------------------	-------------------------------	--------------------------------

Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

USP1 (D37B4) Rabbit mAb recognizes endogenous levels of total USP1 protein.

Species predicted to react based on 100% sequence homology

Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu768 of human USP1 protein.

Background

Ubiquitinating enzymes (UBEs) catalyze protein ubiquitination, a reversible process countered by deubiquitinating enzymes (DUB) action (1,2). There are five DUB subfamilies including the USP, UCH, OTU, MJD, and JAMM enzymes. USP1 belongs to the USP subfamily and is regulated in a cell cycle dependent manner by both transcriptional and ubiquitin-proteasomal mechanisms (3). USP1 is a nuclear protein and localizes to chromatin where it is specifically associated with FANCD2. USP1 deubiquitinates monoubiquitinated FANCD2, which plays an important role in DNA damage repair and Chk1 protein stability (3,4). Another important target of USP1 is PCNA. USP1 deubiquitinates monoubiquitinated PCNA, thereby negatively regulating PCNA-mediated translesion synthesis (TLS) during DNA repair (5). USP1 interaction with UAF1, a WD40 repeat-containing protein, leads to formation of an activated USP1/UAF1 complex, which is required for the deubiquitinase activity of USP1 (6,7).

Background References

1. Nijman, S.M. et al. (2005) *Cell* 123, 773-86.
2. Nalepa, G. et al. (2006) *Nat Rev Drug Discov* 5, 596-613.
3. Nijman, S.M. et al. (2005) *Mol Cell* 17, 331-9.
4. Guervilly, J.H. et al. (2011) *Hum Mol Genet*, .
5. Huang, T.T. et al. (2006) *Nat Cell Biol* 8, 339-47.
6. Cohn, M.A. et al. (2007) *Mol Cell* 28, 786-97.
7. Cohn, M.A. et al. (2009) *J Biol Chem* 284, 5343-51.

Species Reactivity

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

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **Mk:** Monkey

Trademarks and Patents

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

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.