

#8501 Store at -20°C

USP10 (D7A5) Rabbit mAb



Cell Signaling
TECHNOLOGY®

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

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC, eCLIP	H M R Mk	Endogenous	110	Rabbit IgG	#Q14694	9100

Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)
eCLIP

Dilution

1:1000
1:200
1:100 - 1:400
1:200

For more information about eCLIP and the RBP-eCLIP kit, please visit Eclipse Bioinnovations.

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

USP10 (D7A5) Rabbit mAb recognizes endogenous levels of total USP10 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human USP10 protein.

Background

Ubiquitinating enzymes (UBEs) catalyze protein ubiquitination, a reversible process countered by deubiquitinating enzyme (DUB) action (1,2). Five DUB subfamilies are recognized, including the USP, UCH, OTU, MJD, and JAMM enzymes. USP10 possesses amino acid sequences that match the consensus cysteine and histidine boxes representative of the USP family of deubiquitinating enzymes. At the posttranslational level, USP10 appears to be regulated through both protein-protein interactions and phosphorylation. Indeed, interaction of USP10 with Ras-GAP SH3 domain binding protein (G3BP) has been found to inhibit its ability to catalyze the disassembly of ubiquitin chains (3). Furthermore, ATM-mediated phosphorylation of USP10 at Thr42 and Ser337 was shown to promote USP10 stabilization and redistribution from the cytoplasm to the nucleus, where it functions in p53 deubiquitination, stabilization, and activation in response to genotoxic stress (4). Recently, it was shown that USP10 works in concert with USP13 and Vps34 complexes. USP10, along with USP13, appears to deubiquitinate Vps34 complexes to regulate the levels of this class III PI3K. Beclin-1, another component of these complexes, functions to regulate the stability of USP13, which can deubiquitinate and stabilize the levels of USP10. Therefore, Beclin-1, can indirectly regulate p53 stability by controlling the DUB activity of USP10 (5). USP10 also functions in the endosomal compartment, where it has been shown to deubiquitinate CFTR in order to enhance its endocytic recycling and cell surface expression (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. Soncini, C. et al. (2001) *Oncogene* 20, 3869-79.
4. Yuan, J. et al. (2010) *Cell* 140, 384-96.
5. Liu, J. et al. (2011) *Cell* 147, 223-34.
6. Bomberger, J.M. et al. (2009) *J Biol Chem* 284, 18778-89.
7. Bomberger, J.M. et al. (2011) *Channels (Austin)* 4, 150-4.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)**eCLIP:** eCLIP**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

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.