

**USP10 Antibody (Center)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP17199c**

**Specification**

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**USP10 Antibody (Center) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q14694</a>
Other Accession	<a href="#">Q3KR59</a> , <a href="#">P52479</a> , <a href="#">Q5ZJN4</a> , <a href="#">A5PJS6</a> , <a href="#">Q7ZXR7</a> , <a href="#">Q2NL57</a> , <a href="#">NP_005144.2</a>
Reactivity	Human
Predicted	Xenopus, Bovine, Chicken, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	87134
Antigen Region	500-529

**USP10 Antibody (Center) - Additional Information**

**Gene ID** 9100

**Other Names**

Ubiquitin carboxyl-terminal hydrolase 10, Deubiquitinating enzyme 10, Ubiquitin thioesterase 10, Ubiquitin-specific-processing protease 10, USP10, KIAA0190

**Target/Specificity**

This USP10 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 500-529 amino acids from the Central region of human USP10.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

USP10 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**USP10 Antibody (Center) - Protein Information**

**Name** USP10 {ECO:0000303|PubMed:11439350, ECO:0000312|HGNC:HGNC:12608}

**Function** Hydrolase that can remove conjugated ubiquitin from target proteins such as p53/TP53, RPS2/us5, RPS3/us3, RPS10/eS10, BECN1, SNX3 and CFTR (PubMed:[11439350](#), PubMed:[18632802](#), PubMed:[31981475](#)). Acts as an essential regulator of p53/TP53 stability: in unstressed cells, specifically deubiquitinates p53/TP53 in the cytoplasm, leading to counteract MDM2 action and stabilize p53/TP53 (PubMed:[20096447](#)). Following DNA damage, translocates to the nucleus and deubiquitinates p53/TP53, leading to regulate the p53/TP53-dependent DNA damage response (PubMed:[20096447](#)). Component of a regulatory loop that controls autophagy and p53/TP53 levels: mediates deubiquitination of BECN1, a key regulator of autophagy, leading to stabilize the PIK3C3/VPS34-containing complexes (PubMed:[21962518](#)). In turn, PIK3C3/VPS34-containing complexes regulate USP10 stability, suggesting the existence of a regulatory system by which PIK3C3/VPS34-containing complexes regulate p53/TP53 protein levels via USP10 and USP13 (PubMed:[21962518](#)). Does not deubiquitinate MDM2 (PubMed:[20096447](#)). Plays a key role in 40S ribosome subunit recycling when a ribosome has stalled during translation: acts both by inhibiting formation of stress granules, which store stalled translation pre-initiation complexes, and mediating deubiquitination of 40S ribosome subunits (PubMed:[27022092](#), PubMed:[31981475](#), PubMed:[34348161](#), PubMed:[34469731](#)). Acts as a negative regulator of stress granules formation by lowering G3BP1 and G3BP2 valence, thereby preventing G3BP1 and G3BP2 ability to undergo liquid-liquid phase separation (LLPS) and assembly of stress granules (PubMed:[11439350](#), PubMed:[27022092](#), PubMed:[32302570](#)). Promotes 40S ribosome subunit recycling following ribosome dissociation in response to ribosome stalling by mediating deubiquitination of 40S ribosomal proteins RPS2/us5, RPS3/us3 and RPS10/eS10, thereby preventing their degradation by the proteasome (PubMed:[31981475](#), PubMed:[34348161](#), PubMed:[34469731](#)). Part of a ribosome quality control that takes place when ribosomes have stalled during translation initiation (iRQC): USP10 acts by removing monoubiquitination of RPS2/us5 and RPS3/us3, promoting 40S ribosomal subunit recycling (PubMed:[34469731](#)). Deubiquitinates CFTR in early endosomes, enhancing its endocytic recycling (PubMed:[19398555](#)). Involved in a TANK-dependent negative feedback response to attenuate NF-kappa-B activation via deubiquitinating IKBKG or TRAF6 in response to interleukin-1-beta (IL1B) stimulation or upon DNA damage (PubMed:[25861989](#)). Deubiquitinates TBX21 leading to its stabilization (PubMed:[24845384](#)). Plays a negative role in the RLR signaling pathway upon RNA virus infection by blocking the RIGI-mediated MAVS activation. Mechanistically, removes the unanchored 'Lys-63'-linked polyubiquitin chains of MAVS to inhibit its aggregation, essential for its activation (PubMed:[37582970](#)).

#### Cellular Location

Cytoplasm. Nucleus. Early endosome. Note=Cytoplasmic in normal conditions (PubMed:[20096447](#)). After DNA damage, translocates to the nucleus following phosphorylation by ATM (PubMed:[20096447](#))

#### Tissue Location

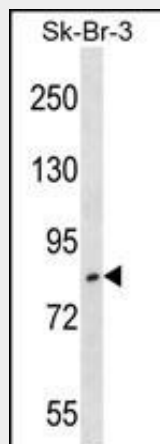
Widely expressed..

### USP10 Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## USP10 Antibody (Center) - Images



USP10 Antibody (Center) (Cat. #AP17199c) western blot analysis in SK-BR-3 cell line lysates (35ug/lane). This demonstrates the USP10 antibody detected the USP10 protein (arrow).

## USP10 Antibody (Center) - Background

Ubiquitin is a highly conserved protein that is covalently linked to other proteins to regulate their function and degradation. This gene encodes a member of the ubiquitin-specific protease family of cysteine proteases. The enzyme specifically cleaves ubiquitin from ubiquitin-conjugated protein substrates. The protein is found in the nucleus and cytoplasm. It functions as a co-factor of the DNA-bound androgen receptor complex, and is inhibited by a protein in the Ras-GTPase pathway. The human genome contains several pseudogenes similar to this gene. [provided by RefSeq].

## USP10 Antibody (Center) - References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :  
Yuan, J., et al. Cell 140(3):384-396(2010)  
Bomberger, J.M., et al. J. Biol. Chem. 284(28):18778-18789(2009)  
Gudbjartsson, D.F., et al. Nat. Genet. 40(5):609-615(2008)  
Olsen, J.V., et al. Cell 127(3):635-648(2006)