

# USP10 Rabbit mAb

Catalog # AP76233

## Product Information

Application	WB, IHC-P, IHC-F, IP, ICC
Primary Accession	<a href="#">Q14694</a>
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	87134

## Additional Information

Gene ID	9100
Other Names	USP10
Dilution	WB~~1/500-1/1000 IHC-P~~N/A IHC-F~~N/A IP~~N/A ICC~~N/A
Format	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.

## Protein Information

Name	USP10 {ECO:0000303 PubMed:11439350, ECO:0000312 HGNC:HGNC:12608}
Function	<p>Hydrolase that can remove conjugated ubiquitin from target proteins such as p53/TP53, RPS2/us5, RPS3/us3, RPS10/eS10, BECN1, SNX3 and CFTR (PubMed:<a href="#">11439350</a>, PubMed:<a href="#">18632802</a>, PubMed:<a href="#">31981475</a>). 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:<a href="#">20096447</a>). Following DNA damage, translocates to the nucleus and deubiquitinates p53/TP53, leading to regulate the p53/TP53-dependent DNA damage response (PubMed:<a href="#">20096447</a>).</p> <p>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:<a href="#">21962518</a>). 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:<a href="#">21962518</a>). Does not deubiquitinate MDM2 (PubMed:<a href="#">20096447</a>).</p> <p>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:<a href="#">27022092</a>, PubMed:<a href="#">31981475</a>, PubMed:<a href="#">34348161</a>, PubMed:<a href="#">34469731</a>). Acts as a negative</p>

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](#)).

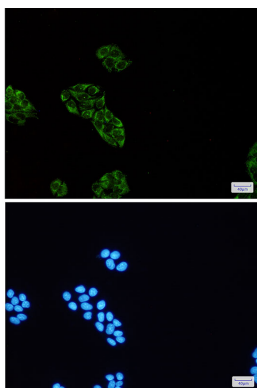
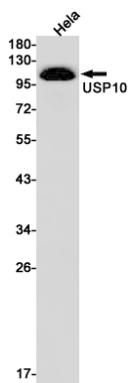
#### Cellular Location

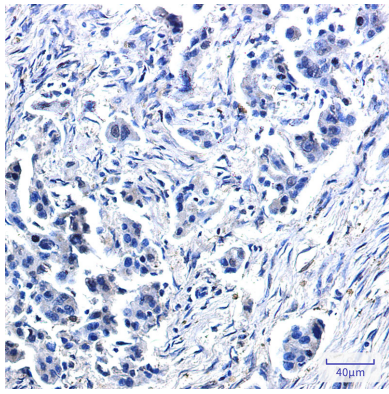
Cytoplasm. Nucleus. Early endosome. Note=Cytoplasmic in normal conditions (PubMed:20096447). After DNA damage, translocates to the nucleus following phosphorylation by ATM (PubMed:20096447)

#### Tissue Location

Widely expressed..

### Images





Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.