

## Product datasheet

### Anti-USP10 antibody [EPR4261] ab109219

KO VALIDATED Recombinant RabMAb

★★★★★ [1 Abreviews](#) [7 References](#) [6 Images](#)

#### Overview

Product name	Anti-USP10 antibody [EPR4261]
Description	Rabbit monoclonal [EPR4261] to USP10
Host species	Rabbit
Tested applications	<b>Suitable for:</b> WB, IP, IHC-P, ICC/IF <b>Unsuitable for:</b> Flow Cyt
Species reactivity	<b>Reacts with:</b> Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa, 293T, A375 and A549 cell lysates. IHC-P: Human colon tissue. ICC: MCF-7 IP: HeLa.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

#### Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.2 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Tissue culture supernatant
Clonality	Monoclonal

Clone number	EPR4261
Isotype	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab109219 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

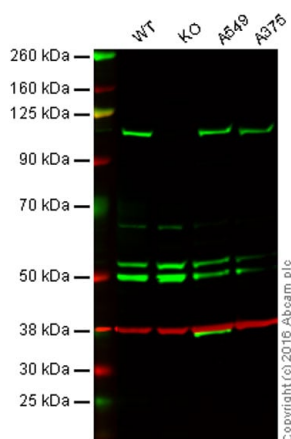
Application	Abreviews	Notes
WB	★★★★★ (1)	1/1000 - 1/10000. Detects a band of approximately 110 kDa (predicted molecular weight: 87 kDa).
IP		1/10 - 1/100.
IHC-P		1/250 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Antigen retrieval is recommended.
ICC/IF		1/250 - 1/500.

**Application notes** Is unsuitable for Flow Cyt.

## Target

<b>Function</b>	Hydrolase that can remove conjugated ubiquitin from target proteins such as p53/TP53, SNX3 and CFTR. 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. Following DNA damage, translocates to the nucleus and deubiquitinates p53/TP53, leading to regulate the p53/TP53-dependent DNA damage response. Does not deubiquitinate MDM2. Deubiquitinates CFTR in early endosomes, enhancing its endocytic recycling.
<b>Tissue specificity</b>	Widely expressed.
<b>Sequence similarities</b>	Belongs to the peptidase C19 family. USP10 subfamily.
<b>Post-translational modifications</b>	Phosphorylated by ATM following DNA damage, leading to stabilization and translocation it to the nucleus.
<b>Cellular localization</b>	Cytoplasm. Nucleus. Early endosome. Cytoplasmic in normal conditions. After DNA damage, translocates to the nucleus following phosphorylation by ATM.

## Images



Western blot - Anti-USP10 antibody [EPR4261]  
(ab109219)

**Lane 1:** Wild-type HAP1 cell lysate (20 µg)

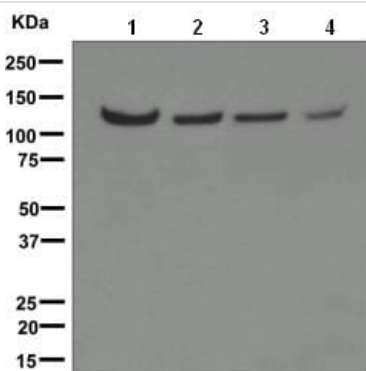
**Lane 2:** USP10 knockout HAP1 cell lysate (20 µg)

**Lane 3:** A549 cell lysate (20 µg)

**Lane 4:** A375 cell lysate (20 µg)

**Lanes 1 to 4:** Merged signal (red and green). Green - ab109219 observed at 115 kDa. Red - loading control, [ab8245](#), observed at 37 kDa.

ab109219 was shown to recognize USP10 when USP10 knockout samples were used, along with additional cross-reactive bands. Wild-type and USP10 knockout samples were subjected to SDS-PAGE. ab109219 and [ab8245](#) (loading control to GAPDH) were both diluted at 1/1000 and 1/10000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1/10000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-USP10 antibody [EPR4261]  
(ab109219)

**All lanes :** Anti-USP10 antibody [EPR4261] (ab109219) at 1/1000 dilution

**Lane 1 :** Hela cell lysate

**Lane 2 :** 293T cell lysate

**Lane 3 :** A375 cell lysate

**Lane 4 :** A549 cell lysate

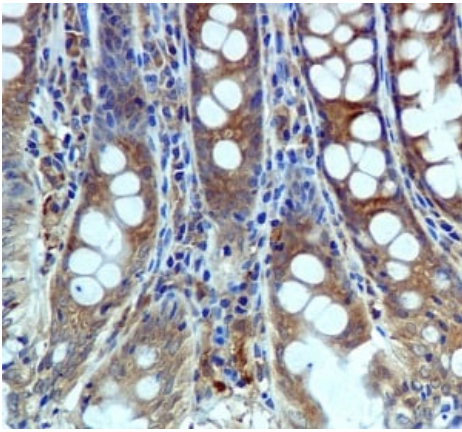
Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes :** HRP labelled goat anti-rabbit at 1/2000 dilution

**Predicted band size:** 87 kDa

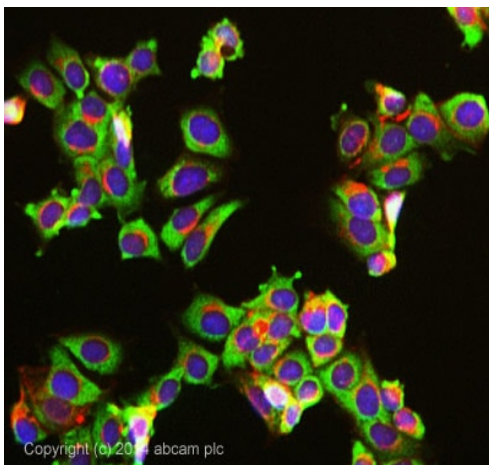
**Observed band size:** 110 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-USP10 antibody [EPR4261] (ab109219)

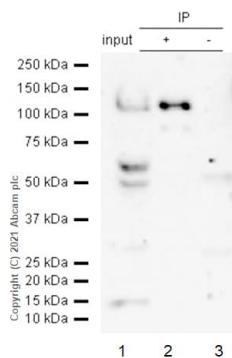
ab109219, at a 1/250 dilution, staining USP10 in paraffin embedded Human colon tissue by Immunohistochemistry.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-USP10 antibody [EPR4261] (ab109219)

ICC/IF image of ab109219 stained MCF-7 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody ab109219 at 1/50 dilution overnight at +4°C. The secondary antibody (pseudo-colored green) was Alexa Fluor® 488 goat anti-rabbit (**ab150081**) IgG (H+L) preadsorbed, used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (pseudo-colored red) at a 1/200 dilution for 1h at room temperature. DAPI was used to stain the cell nuclei (pseudo-colored blue) at a concentration of 1.43µM for 1hour at room temperature.



Immunoprecipitation - Anti-USP10 antibody  
[EPR4261] (ab109219)

USP10 was immunoprecipitated from 0.35 mg HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10 µg with 109219 at 1/30 dilution (2µg) . VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)) was used at 1/5000 dilution.

Lane 1: HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate 10 µg

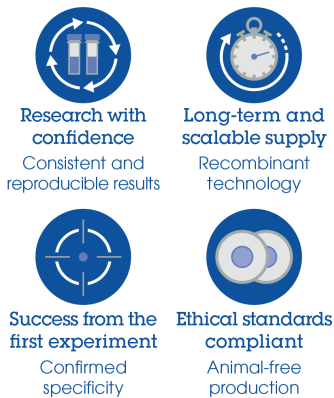
Lane 2: ab109219 IP in HeLa whole cell lysate

Lane 3: Rabbit monoclonal IgG ([ab172730](#)) instead of ab109219 in HeLa whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDm/TBST.

Fresh lysate should be used to minimize protein degradation.

### Why choose a recombinant antibody?



Anti-USP10 antibody [EPR4261] (ab109219)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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