10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

USP2 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2131b

Specification

USP2 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	O75604
Other Accession	Q5U349, O88623, Q2KHV7
Reactivity	**Human**
Predicted	**Bovine, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**380-410**

USP2 Antibody (C-term) - Additional Information

Gene ID 9099

Other Names
Ubiquitin carboxyl-terminal hydrolase 2, 41 kDa ubiquitin-specific protease, Deubiquitinating enzyme 2, Ubiquitin thioesterase 2, Ubiquitin-specific-processing protease 2, USP2, UBP41

Target/Specificity
This USP2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 380-410 amino acids from the C-terminal region of human USP2.

Dilution
WB~~1:1000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

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
USP2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

USP2 Antibody (C-term) - Protein Information

Name USP2

Synonyms UBP41

Function Hydrolase that deubiquitinates polyubiquitinated target proteins such as MDM2, MDM4 and CCND1 (PubMed:17290220, PubMed:19838211, PubMed:19917254). Isoform 1 and isoform 4 possess both ubiquitin-specific peptidase and isopeptidase activities (By similarity). Deubiquitinates MDM2 without reversing MDM2-mediated p53/TP53 ubiquitination and thus indirectly promotes p53/TP53 degradation and limits p53 activity (PubMed:17290220, PubMed:19838211). Has no deubiquitinase activity against p53/TP53 (PubMed:17290220). Prevents MDM2-mediated degradation of MDM4 (PubMed:17290220). Plays a role in the G1/S cell-cycle progression in normal and cancer cells (PubMed:19917254). Regulates the circadian clock by modulating its intrinsic circadian rhythm and its capacity to respond to external cues (By similarity). Associates with clock proteins and deubiquitinates core clock component PER1 but does not affect its overall stability (By similarity). Regulates the nucleocytoplasmic shuttling and nuclear retention of PER1 and its repressive role on the clock transcription factors CLOCK and BMAL1 (By similarity). Plays a role in the regulation of myogenic differentiation of embryonic muscle cells (By similarity).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:O88623}. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:O88623} Note=Localizes in the spermatid head in late-elongating spermatids in the thin area between the outer acrosomal membrane and the plasma membrane. {ECO:0000250|UniProtKB:Q5U349}

Tissue Location
Expressed in mesangial cells of the kidney and in different types of glomerulonephritides (at protein level)

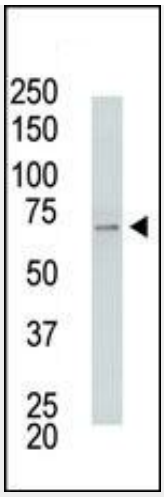
USP2 Antibody (C-term) - Protocols

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

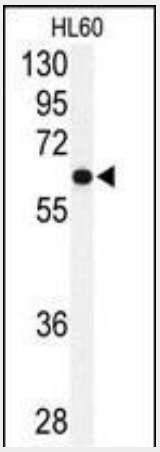
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

USP2 Antibody (C-term) - Images

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



The anti-USP2 Antibody (C-term)(Cat.#AP2131b) is used in Western blot to detect USP2 in USP2-transfected HeLa cell lysates. Transfection data is kindly provided by Dr. B. Pierrat from the Novartis Institute for Biomedical Research (Basel, Switzerland).



Western blot analysis of anti-USP2 Antibody (C-term) (Cat.#AP2131b) in HL60 cell line lysates (35ug/lane).USP2(arrow) was detected using the purified Pab.

USP2 Antibody (C-term) - Background

Modification of target proteins by ubiquitin participates in a wide array of biological functions. Proteins destined for degradation or processing via the 26 S proteasome are coupled to multiple copies of ubiquitin. However, attachment of ubiquitin or ubiquitin-related molecules may also result in changes in subcellular distribution or modification of protein activity. An additional level of ubiquitin regulation, deubiquitination, is catalyzed by proteases called deubiquitinating enzymes, which fall into four distinct families. Ubiquitin C-terminal hydrolases, ubiquitin-specific processing proteases (USPs),1 OTU-domain ubiquitin-aldehyde-binding proteins, and Jab1/Pad1/MPN-domain-containing metallo-enzymes. Among these four families, USPs represent the most widespread and represented deubiquitinating enzymes across evolution. USPs tend to release ubiquitin from a conjugated protein. They display similar catalytic domains containing conserved Cys and His boxes but divergent N-terminal and occasionally C-terminal extensions, which are thought to function in substrate recognition, subcellular localization, and protein-protein interactions.

USP2 Antibody (C-term) - References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).

USP2 Antibody (C-term) - Citations

- USP2a protein deubiquitinates and stabilizes the circadian protein CRY1 in response to inflammatory signals.
- Ubiquitination-deubiquitination balance dictates ligand-stimulated PTHR sorting.