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USP2 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8586b

Product Information

Application	WB, E
Primary Accession	O75604
Reactivity	Human, Green Monkey
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,k
Clone Names	1738CT331.50.87
Calculated MW	68072

Additional Information

Gene ID	9099
Other Names	Ubiquitin carboxyl-terminal hydrolase 2, 3.4.19.12, 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 a mouse immunized with a recombinant protein between 1-258 amino acids from human USP2.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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 is for research use only and not for use in diagnostic or therapeutic procedures.

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)

Background

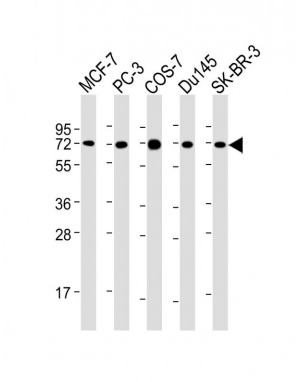
Hydrolase that deubiquitinates polyubiquitinated target proteins such as MDM2, MDM4 and CCND1. Isoform 1 and isoform 4 possess both ubiquitin-specific peptidase and isopeptidase activities. Deubiquitinates MDM2 without reversing MDM2-mediated p53/TP53 ubiquitination and thus indirectly promotes p53/TP53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

References

Gong L.,et al.Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
Rossi S.,et al.Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Taylor T.D.,et al.Nature 440:497-500(2006).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

Images

All lanes : Anti-USP2 Antibody at 1:2000 dilution Lane 1: MCF-7 whole cell lysate Lane 2: PC-3 whole cell lysate Lane 3: COS-7 whole cell lysate Lane 4: Du145 whole cell lysate Lane 5: SK-BR-3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 68 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Citations

- Targeted destruction of VISTA boosts anti-tumor immunotherapy.

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