

**USP5 Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AW5077**

**Specification**

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**USP5 Antibody - Product Information**

Application	WB,E
Primary Accession	<a href="#">P45974</a>
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Calculated MW	H=96;M=96;Rat=96 KDa
Isotype	IgG1, $\kappa$
Antigen Source	HUMAN

**USP5 Antibody - Additional Information**

**Gene ID** 8078

**Antigen Region**  
1-160

**Other Names**

Ubiquitin carboxyl-terminal hydrolase 5, Deubiquitinating enzyme 5, Isopeptidase T, Ubiquitin thioesterase 5, Ubiquitin-specific-processing protease 5, USP5, ISOT

**Dilution**

WB~~1:1000

**Target/Specificity**

This USP5 antibody is generated from a mouse immunized with a recombination protein from the human region of human USP5.

**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**

USP5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**USP5 Antibody - Protein Information**

**Name** USP5

## Synonyms ISOT

### Function

Deubiquitinating enzyme that participates in a wide range of cellular processes by specifically cleaving isopeptide bonds between ubiquitin and substrate proteins or ubiquitin itself. Affects thereby important cellular signaling pathways such as NF-kappa-B, Wnt/beta- catenin, and cytokine production by regulating ubiquitin-dependent protein degradation. Participates in the activation of the Wnt signaling pathway by promoting FOXM1 deubiquitination and stabilization that induces the recruitment of beta-catenin to Wnt target gene promoter (PubMed:<a href="http://www.uniprot.org/citations/26912724" target="\_blank">26912724</a>). Regulates the assembly and disassembly of heat-induced stress granules by mediating the hydrolysis of unanchored ubiquitin chains (PubMed:<a href="http://www.uniprot.org/citations/29567855" target="\_blank">29567855</a>). Promotes lipopolysaccharide-induced apoptosis and inflammatory response by stabilizing the TXNIP protein (PubMed:<a href="http://www.uniprot.org/citations/37534934" target="\_blank">37534934</a>). Affects T-cell biology by stabilizing the inhibitory receptor on T-cells PDC1 (PubMed:<a href="http://www.uniprot.org/citations/37208329" target="\_blank">37208329</a>). Acts as a negative regulator of autophagy by regulating ULK1 at both protein and mRNA levels (PubMed:<a href="http://www.uniprot.org/citations/37607937" target="\_blank">37607937</a>). Acts also as a negative regulator of type I interferon production by simultaneously removing both 'Lys-48'-linked unanchored and 'Lys-63'-linked anchored polyubiquitin chains on the transcription factor IRF3 (PubMed:<a href="http://www.uniprot.org/citations/39761299" target="\_blank">39761299</a>). Modulates the stability of DNA mismatch repair protein MLH1 and counteracts the effect of the ubiquitin ligase UBR4 (PubMed:<a href="http://www.uniprot.org/citations/39032648" target="\_blank">39032648</a>). Upon activation by insulin, it gets phosphorylated through mTORC1-mediated phosphorylation to enhance YTHDF1 stability by removing 'Lys-11'-linked polyubiquitination (PubMed:<a href="http://www.uniprot.org/citations/39900921" target="\_blank">39900921</a>). May also deubiquitinate other substrates such as the calcium channel CACNA1H (By similarity).

### Cellular Location

Cytoplasm. Cytoplasm, Stress granule. Nucleus

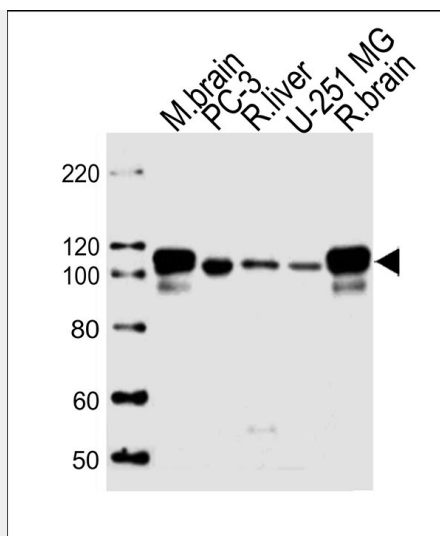
## USP5 Antibody - Protocols

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](#)

## USP5 Antibody - Images





Western blot analysis of lysates from mouse brain tissue, PC-3 cell line, rat liver tissue, U-251 MG cell line, rat brain tissue (from left to right), using USP5 Antibody (Cat. #AW5077). AW5077 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L (HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20 µg per lane.

#### USP5 Antibody - Background

Cleaves linear and branched multiubiquitin polymers with a marked preference for branched polymers. Involved in unanchored &apos;Lys-48&apos;-linked polyubiquitin disassembly. Binds linear and &apos;Lys- 63&apos;-linked polyubiquitin with a lower affinity. Knock-down of USP5 causes the accumulation of p53/TP53 and an increase in p53/TP53 transcriptional activity because the unanchored polyubiquitin that accumulates is able to compete with ubiquitinated p53/TP53 but not with MDM2 for proteasomal recognition.

#### USP5 Antibody - References

Falquet L., et al. FEBS Lett. 376:233-237(1995).  
Ansari-Lari M.A., et al. Genome Res. 6:314-326(1996).  
Ansari-Lari M.A., et al. Genome Res. 7:268-280(1997).  
Tashayev V.L., et al. Submitted (NOV-1995) to the EMBL/GenBank/DDBJ databases.  
Mural R.J., et al. Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.