

## USP2

**Reactivity:** Human Rat

**Tested applications:** WB IHC

**Recommended Dilution:** WB 1:200 - 1:500 IHC 1:50 - 1:100

**Calculated MW:** 68kDa

**Observed MW:** Refer to Figures

**Immunogen:**

A synthetic peptide of human USP2

**Storage Buffer:**

Store at 4. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

**Synonym:**

USP2;UBP41;USP9 ;

**Catalog #:** A1433

**Antibody Type:**

Polyclonal Antibody

**Species:** Rabbit

**Gene ID:** 9099

**Isotype:** IgG

**Swiss Prot:** O75604

**Purity:** Affinity purification

For research use only.

**Background:**

Ubiquitinating enzymes (UBEs) catalyze protein ubiquitination, a reversible process countered by deubiquitinating enzyme (DUB) action (1,2). Five DUB subfamilies are recognized, including the USP, UCH, OTU, MJD and JAMM enzymes. Ubiquitin-specific-processing protease 2 (USP2) belongs to the USP (UBP/UCH type 2) subfamily and is characterized by its C19 peptidase activity, which is involved in ubiquitin recycling and in the disassembly of various forms of polymeric ubiquitin and ubiquitin-like protein complexes (3). Characteristic of the USP subfamily, USP2 possesses a highly conserved "Cys box" and "His box," which contain a conserved cysteine and histidine residue, respectively, and form part of the active site of this thiol protease. The catalytic core, which lies between the Cys box and His box, is responsible for the deubiquitinating activity of USP2 and is present within each of its splice variants (4,5). There is mounting evidence that USP2 functions as an oncoprotein through multiple mechanisms. In human prostate cancer, USP2 is highly overexpressed and drives tumor growth by binding to and stabilizing fatty acid synthase through deubiquitination (6,7). It has also been demonstrated that USP2 can bind and deubiquitinate both Mdm2 (8) and cyclin D1 (9), which leads to their stabilization and enhanced cell proliferation.

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