

**USP4 Antibody (Internal)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS10995****Specification**

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**USP4 Antibody (Internal) - Product Information**

|                   |                                         |
|-------------------|-----------------------------------------|
| Application       | IHC                                     |
| Primary Accession | <a href="#">Q13107</a>                  |
| Reactivity        | Human, Rabbit, Monkey, Pig, Bovine, Dog |
| Host              | Rabbit                                  |
| Clonality         | Polyclonal                              |
| Calculated MW     | 109kDa KDa                              |

**USP4 Antibody (Internal) - Additional Information****Gene ID** 7375**Other Names**

Ubiquitin carboxyl-terminal hydrolase 4, 3.4.19.12, Deubiquitinating enzyme 4, Ubiquitin thioesterase 4, Ubiquitin-specific-processing protease 4, Ubiquitous nuclear protein homolog, USP4, UNP, UNPH

**Target/Specificity**

Human USP4. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

**Reconstitution & Storage**

Long term: -70°C; Short term: +4°C

**Precautions**

USP4 Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

**USP4 Antibody (Internal) - Protein Information****Name** USP4 {ECO:0000303|PubMed:30514904, ECO:0000312|HGNC:HGNC:12627}**Function**

Deubiquitinating enzyme that removes conjugated ubiquitin from target proteins (PubMed:<a href="http://www.uniprot.org/citations/16316627" target="\_blank">16316627</a>, PubMed:<a href="http://www.uniprot.org/citations/16472766" target="\_blank">16472766</a>, PubMed:<a href="http://www.uniprot.org/citations/16339847" target="\_blank">16339847</a>, PubMed:<a href="http://www.uniprot.org/citations/20595234" target="\_blank">20595234</a>, PubMed:<a href="http://www.uniprot.org/citations/22347420" target="\_blank">22347420</a>, PubMed:<a href="http://www.uniprot.org/citations/25404403" target="\_blank">25404403</a>, PubMed:<a href="http://www.uniprot.org/citations/28604766" target="\_blank">28604766</a>, PubMed:<a href="http://www.uniprot.org/citations/30514904" target="\_blank">30514904</a>). Deubiquitinates PDPK1 (PubMed:<a href="http://www.uniprot.org/citations/22347420"

target="\_blank">22347420</a>). Deubiquitinates TRIM21 (PubMed:<a href="http://www.uniprot.org/citations/16316627" target="\_blank">16316627</a>). Deubiquitinates receptor ADORA2A which increases the amount of functional receptor at the cell surface (PubMed:<a href="http://www.uniprot.org/citations/16339847" target="\_blank">16339847</a>). Deubiquitinates HAS2 (PubMed:<a href="http://www.uniprot.org/citations/28604766" target="\_blank">28604766</a>). Deubiquitinates RHEB in response to EGF signaling, promoting mTORC1 signaling (PubMed:<a href="http://www.uniprot.org/citations/30514904" target="\_blank">30514904</a>). May regulate mRNA splicing through deubiquitination of the U4 spliceosomal protein PRPF3 (PubMed:<a href="http://www.uniprot.org/citations/20595234" target="\_blank">20595234</a>). This may prevent its recognition by the U5 component PRPF8 thereby destabilizing interactions within the U4/U6.U5 snRNP (PubMed:<a href="http://www.uniprot.org/citations/20595234" target="\_blank">20595234</a>). May also play a role in the regulation of quality control in the ER (PubMed:<a href="http://www.uniprot.org/citations/16339847" target="\_blank">16339847</a>).

### Cellular Location

Cytoplasm. Nucleus. Note=Shuttles between the nucleus and cytoplasm. Exported to the cytoplasm in a CRM1-dependent manner and recycled back to the nucleus via the importin alpha/beta heterodimeric import receptor. The relative amounts found in the nucleus and cytoplasm vary according to the cell type

### Tissue Location

Overexpressed in small cell tumors and adenocarcinomas of the lung compared to wild-type lung (at protein level). Expressed in the hippocampal neurons

### Volume

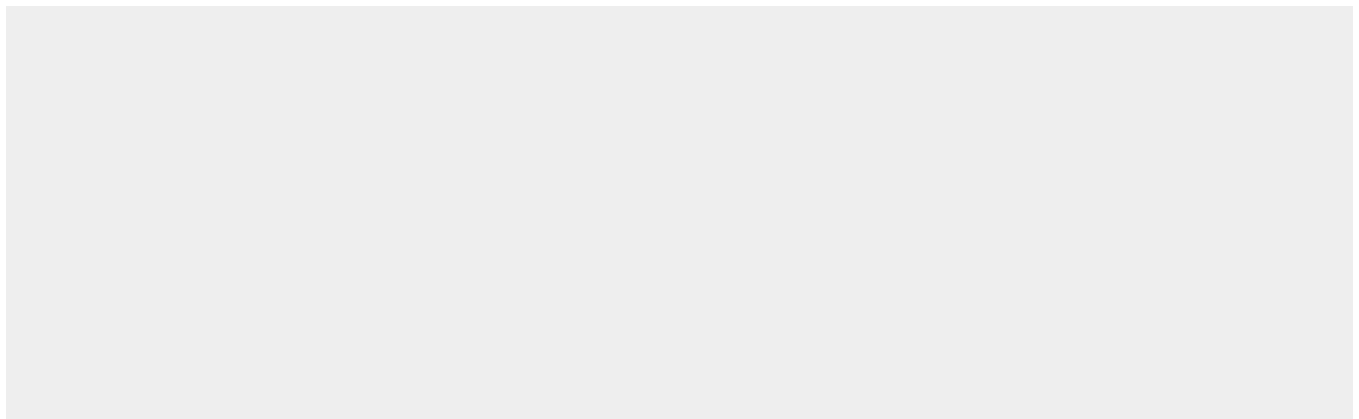
50 µl

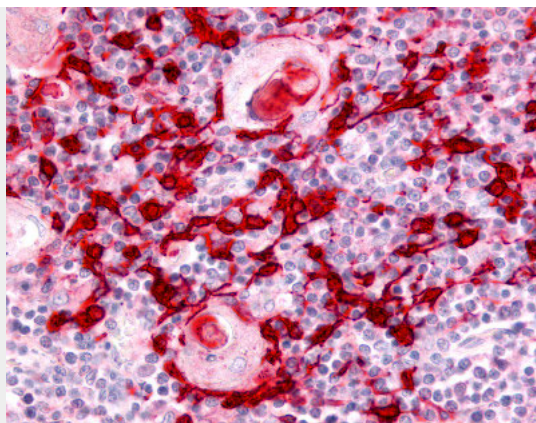
### USP4 Antibody (Internal) - Protocols

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](#)

### USP4 Antibody (Internal) - Images





Anti-USP4 antibody ALS10995 IHC of human thymus.

#### **USP4 Antibody (Internal) - Background**

Hydrolase that deubiquitinates target proteins such as the receptor ADORA2A, PDPK1 and TRIM21. Deubiquitination of ADORA2A increases the amount of functional receptor at the cell surface. May regulate mRNA splicing through deubiquitination of the U4 spliceosomal protein PRPF3. This may prevent its recognition by the U5 component PRPF8 thereby destabilizing interactions within the U4/U6.U5 snRNP. May also play a role in the regulation of quality control in the ER.

#### **USP4 Antibody (Internal) - References**

Gray D.A.,et al.Oncogene 10:2179-2183(1995).  
Gray D.A.,et al.Submitted (OCT-1997) to the EMBL/GenBank/DDBJ databases.  
Frederick A.,et al.Oncogene 16:153-165(1998).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Muzny D.M.,et al.Nature 440:1194-1198(2006).