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USP25 Antibody
Catalog # ASC11789

Specification

USP25 Antibody - Product Information

Application	**WB, IHC-P, IF, E**
Primary Accession	Q9UHP3
Other Accession	NP_037528, 50312666
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 116 kDa** **Observed: 105 kDa KDa**
Application Notes	**USP25 antibody can be used for detection of USP25 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry at 5 µg/mL. For Immunoflorescence start at 20 µg/mL.**

USP25 Antibody - Additional Information

Gene ID **29761**

Target/Specificity
USP25; USP25 antibody is human and mouse reactive. Multiple isoforms of USP25 are known to exist.

Reconstitution & Storage
USP25 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

Precautions
USP25 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

USP25 Antibody - Protein Information

Name USP25

Synonyms USP21

Function
Deubiquitinating enzyme that hydrolyzes ubiquitin moieties conjugated to substrates and thus, functions in various biological processes including inflammation and immune response (PubMed:29518389, PubMed:37683630). Modulates the Wnt/beta-catenin pathway by deubiquitinating and stabilizing tankyrases TNKS1 and TNKS2 (PubMed:28619731, PubMed:<a href="http://www.uniprot.org/citations/30926243"

target="_blank">30926243, PubMed:38875478). Regulates KEAP1- NRF2 axis in the defense against oxidative assaults by deubiquitinating KEAP1 and protecting it from degradation leading to degradation of the NRF2 transcription factor that is responsible for mounting an anti- oxidation gene expression program (PubMed:37339955). Positively regulates RNA virus-induced innate signaling by interacting with and deubiquitinating ERLIN1 and ERLIN2 (PubMed:37683630). In turn, restricts virus production by regulating cholesterol biosynthetic flux (PubMed:37683630). Acts as a negative regulator of interleukin-17- mediated signaling and inflammation through the removal of 'Lys-63'- linked ubiquitination of TRAF5 and TRAF6 (PubMed:23042150). Prevents the ubiquitination and degradation of TRAF3 to reduce the phosphorylation levels of JNK and P38, the secretion of IL-1B and to induce endotoxin tolerance (PubMed:30579117).

Cellular Location
Cytoplasm

Tissue Location
Isoform USP25a is found in most adult and fetal tissues; expression is moderately high in testis, pancreas, kidney, skeletal muscle, liver, lung, placenta, heart, but very low in peripheral blood, colon, small intestine, ovary, prostate, thymus and spleen. Expressed in the brain, with high levels in the cerebral cortex (PubMed:38875478). Isoform USP25b is found in all tissues except heart and skeletal muscle. Isoform USP25m is heart and skeletal muscle specific.

USP25 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 Cytomety
- Cell Culture

USP25 Antibody - Images

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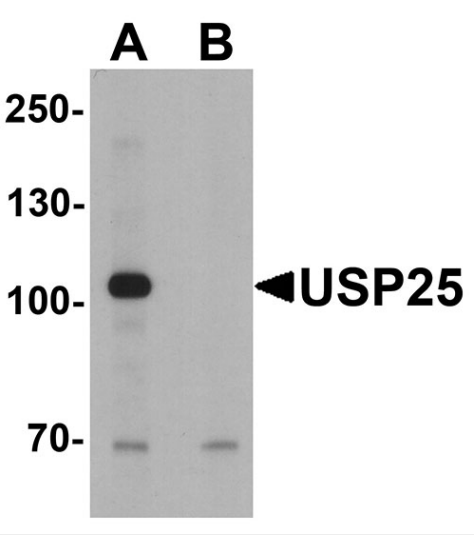
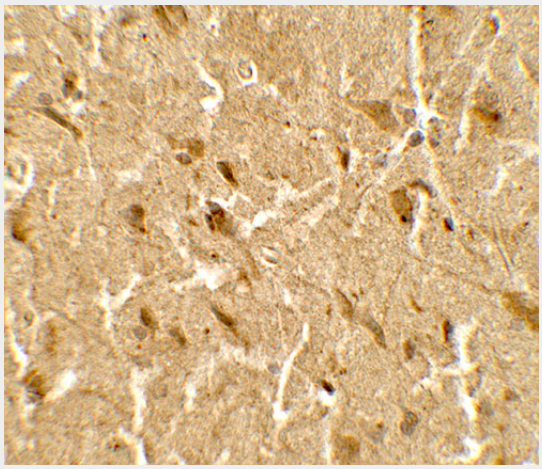
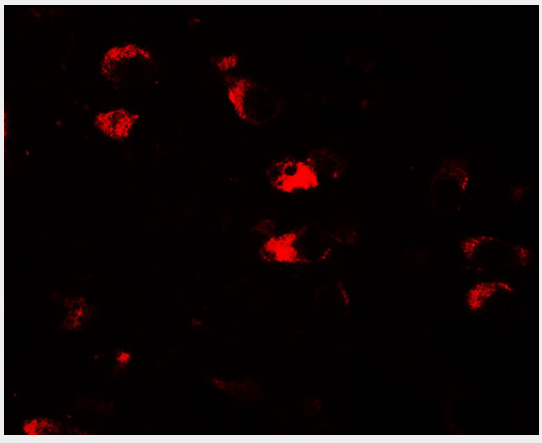


Western blot analysis of USP25 in mouse brain tissue lysate with USP25 antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of USP25 in human brain tissue with USP25 antibody at 5 µg/mL.



Immunofluorescence of USP25 in human brain tissue with USP25 antibody at 20 µg/mL.

USP25 Antibody - Background

USP25 (ubiquitin specific peptidase 25), also known as USP21, belongs to the peptidase C19 family and is a highly conserved 76-amino acid protein involved in regulation of intracellular protein

breakdown, cell cycle regulation, and stress response (1). It contains one UBA-like domain and two UIM (ubiquitin-interacting motif) repeats. Due to alternative splicing events, USP25 is expressed as two short, ubiquitously expressed isoforms and one long, muscle-specific isoform (2). The long isoform of USP25 (USP25m) is upregulated in myogenesis and is implicated in regulation of muscular differentiation and function. USP25 is a deubiquitinating enzyme (DUB) that negatively regulates IL-17-triggered signaling (3,4).

USP25 Antibody - References

Valero R, Marfany G, Gonzalez-Angulo O, et al. USP25, a novel gene encoding a deubiquitinating enzyme, is located in the gene-poor region 21q11.2. Genomics 1999; 62:395-405.
Valero R, Bayes M, Francisca Sanchez-Font M, et al. Characterization of alternatively spliced products and tissue-specific isoforms of USP28 and USP25. Genome Biol. 2001; 2: RESEARCH0043.
Zhong B, Liu X, Wang X, et al. Negative regulation of IL-17-mediated signaling and inflammation by the ubiquitin-specific protease USP25. Nat. Immunol. 2012; 13:1110-7.
Zhong B, Liu X, Wang X, et al. Ubiquitin-specific protease 25 regulates TLR4-dependent innate immune responses through deubiquitination of the adaptor protein TRAF3. Sci. Signal. 2013; 6:ra35.