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USP4 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14657a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q13107
Other Accession	NP_003354.2, NP_955475.1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33960
Calculated MW	108565
Antigen Region	1-30

Additional Information

Gene ID	7375
Other Names	Ubiquitin carboxyl-terminal hydrolase 4, Deubiquitinating enzyme 4, Ubiquitin thioesterase 4, Ubiquitin-specific-processing protease 4, Ubiquitous nuclear protein homolog, USP4, UNP, UNPH
Target/Specificity	This USP4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human USP4.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	USP4 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	USP4 {ECO:0000303|PubMed:30514904, ECO:0000312|HGNC:HGNC:12627}
Function	Deubiquitinating enzyme that removes conjugated ubiquitin from target

proteins (PubMed:16316627, PubMed:16339847, PubMed:16472766, PubMed:20595234, PubMed:22347420, PubMed:25404403, PubMed:28604766, PubMed:30514904). Deubiquitinates PDPK1 (PubMed:22347420). Deubiquitinates TRIM21 (PubMed:16316627). Deubiquitinates receptor ADORA2A which increases the amount of functional receptor at the cell surface (PubMed:16339847). Deubiquitinates HAS2 (PubMed:28604766). Deubiquitinates MAVs leading to maintain MAVS protein stability, resulting in increased production of type I interferons (IFN-I) and enhanced antiviral innate immune responses against viral infections (PubMed:39589880). Deubiquitinates RHEB in response to EGF signaling, promoting mTORC1 signaling (PubMed:30514904). May regulate mRNA splicing through deubiquitination of the U4 spliceosomal protein PRPF3 (PubMed:20595234). This may prevent its recognition by the U5 component PRPF8 thereby destabilizing interactions within the U4/U6.U5 snRNP (PubMed:20595234). May also play a role in the regulation of quality control in the ER (PubMed:16339847).

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

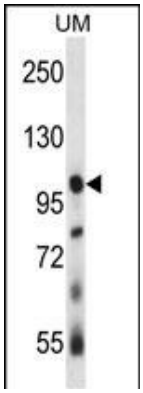
Background

Hydrolase that deubiquitinates target proteins such as the receptor ADORA2A and TRIM21. Deubiquitination of ADORA2A increases the amount of functional receptor at the cell surface. Plays a role in the regulation of quality control in the ER.

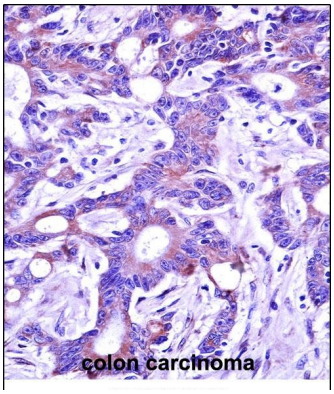
References

Morgan, A.R., et al. Hum. Immunol. 71(6):602-609(2010)
So, H.C., et al. Am. J. Med. Genet. B Neuropsychiatr. Genet. 153B (1), 103-113 (2010) :
Zhao, B., et al. J. Cell. Mol. Med. 13 (8B), 1886-1895 (2009) :
Milojevic, T., et al. Mol. Pharmacol. 69(4):1083-1094(2006)
Wada, K., et al. Biochem. Biophys. Res. Commun. 342(1):253-258(2006)

Images



USP4 Antibody (N-term) (Cat. #AP14657a) western blot analysis in human uterine tumor tissue lysates (35ug/lane).This demonstrates the USP4 antibody detected the USP4 protein (arrow).



USP4 Antibody (N-term) (AP14657a)immunohistochemistry analysis in formalin fixed and paraffin embedded human colon carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of USP4 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

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