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USP21 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1069a

Product Information

Application	IHC-P, WB, E
Primary Accession	Q9UK80
Other Accession	B2GUX4, Q9QZL6, Q2KJ72
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB2809
Calculated MW	62656
Antigen Region	1-30

Additional Information

Gene ID	27005
Other Names	Ubiquitin carboxyl-terminal hydrolase 21, Deubiquitinating enzyme 21, Ubiquitin thioesterase 21, Ubiquitin-specific-processing protease 21, USP21, USP23
Target/Specificity	This USP21 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human USP21.
Dilution	IHC-P~~1:100~500 WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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	USP21 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	USP21 {ECO:0000303|PubMed:10799498, ECO:0000312|HGNC:HGNC:12620}

Function	Deubiquitinates histone H2A, a specific tag for epigenetic transcriptional repression, thereby acting as a coactivator (By similarity). Deubiquitination of histone H2A releases the repression of di- and trimethylation of histone H3 at 'Lys-4', resulting in regulation of transcriptional initiation (By similarity). Regulates gene expression via histone H2A deubiquitination (By similarity). Deubiquitinates BAZ2A/TIP5 leading to its stabilization (PubMed:26100909). Also capable of removing NEDD8 from NEDD8 conjugates but has no effect on Sentrin-1 conjugates (PubMed:10799498). Also acts as a negative regulator of the ribosome quality control (RQC) by mediating deubiquitination of 40S ribosomal proteins RPS10/eS10 and RPS20/uS10, thereby antagonizing ZNF598-mediated 40S ubiquitination (PubMed:32011234).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Highly expressed in heart, pancreas and skeletal muscle. Also expressed in brain, placenta, liver and kidney, and at very low level in lung.

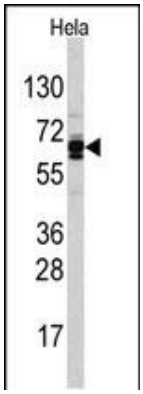
Background

USP21 is a ubiquitin-specific protease, an enzyme that removes ubiquitin from ubiquitinated proteins. The encoded protein belongs to the C19 peptidase family, also known as family 2 of ubiquitin carboxyl-terminal hydrolases. This protein has been reported to be capable of removing NEDD8 from NEDD8 conjugates.

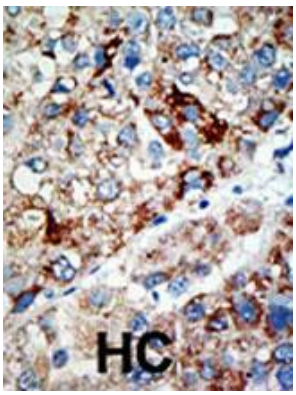
References

Puente, X.S., et al., Nat. Rev. Genet. 4(7):544-558 (2003).
Gong, L., et al., J. Biol. Chem. 275(19):14212-14216 (2000).
Hillier, L.D., et al., Genome Res. 6(9):807-828 (1996).
Smith, T.S., et al., Biochim. Biophys. Acta 1490 (1-2), 184-188 (2000).

Images



Western blot analysis of anti-USP21 Antibody (N-term) (Cat. AP1069a) in Hela cell line lysates (35ug/lane). USP21 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Deubiquitination and stabilization of IL-33 by USP21.
- Identification of the E3 deubiquitinase ubiquitin-specific peptidase 21 (USP21) as a positive regulator of the transcription factor GATA3.