10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

USP16 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2144c

Product Information

Application	WB, E
Primary Accession	Q9Y5T5
Other Accession	NP_006438
Reactivity	Human
Predicted	Bovine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB4343/4344
Calculated MW	93570
Antigen Region	386-416

Additional Information

Gene ID	10600
Other Names	Ubiquitin carboxyl-terminal hydrolase 16 {ECO:0000255|HAMAP-Rule:MF_03062}, 341912 {ECO:0000255|HAMAP-Rule:MF_03062}, Deubiquitinating enzyme 16 {ECO:0000255|HAMAP-Rule:MF_03062}, Ubiquitin thioesterase 16 {ECO:0000255|HAMAP-Rule:MF_03062}, Ubiquitin-processing protease UBP-M, Ubiquitin-specific-processing protease 16 {ECO:0000255|HAMAP-Rule:MF_03062}, USP16 {ECO:0000255|HAMAP-Rule:MF_03062}
Target/Specificity	This USP16 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 386-416 amino acids from the Central region of human USP16.
Dilution	WB~~1:1000 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	USP16 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	USP16 {ECO:0000255|HAMAP-Rule:MF_03062}
Function	Specifically deubiquitinates 'Lys-120' of histone H2A (H2AK119Ub), a specific tag for epigenetic transcriptional repression, thereby acting as a coactivator (PubMed:17914355). Deubiquitination of histone H2A is a prerequisite for subsequent phosphorylation at 'Ser- 11' of histone H3 (H3S10ph), and is required for chromosome segregation when cells enter into mitosis (PubMed:17914355). In resting B- and T- lymphocytes, phosphorylation by AURKB leads to enhance its activity, thereby maintaining transcription in resting lymphocytes. Regulates Hox gene expression via histone H2A deubiquitination (PubMed:17914355). Prefers nucleosomal substrates (PubMed:17914355). Does not deubiquitinate histone H2B (PubMed:17914355). Also deubiquitinates non- histone proteins, such as ribosomal protein RPS27A: deubiquitination of monoubiquitinated RPS27A promotes maturation of the 40S ribosomal subunit (PubMed:32129764). Also mediates deubiquitination of tektin proteins (TEKT1, TEKT2, TEK3, TEKT4 and TEKT5), promoting their stability.
Cellular Location	Nucleus. Cytoplasm
Tissue Location	Present in all the tissues examined including fetal brain, lung, liver, kidney, and adult heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas

Background

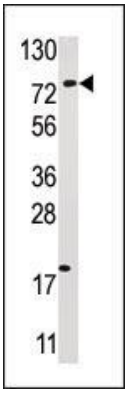
Modification of target proteins by ubiquitin participates in a wide array of biological functions. Proteins destined for degradation or processing via the 26 S proteasome are coupled to multiple copies of ubiquitin. However, attachment of ubiquitin or ubiquitin-related molecules may also result in changes in subcellular distribution or modification of protein activity. An additional level of ubiquitin regulation, deubiquitination, is catalyzed by proteases called deubiquitinating enzymes, which fall into four distinct families. Ubiquitin C-terminal hydrolases, ubiquitin-specific processing proteases (USPs),1 OTU-domain ubiquitin-aldehyde-binding proteins, and Jab1/Pad1/MPN-domain-containing metallo-enzymes. Among these four families, USPs represent the most widespread and represented deubiquitinating enzymes across evolution. USPs tend to release ubiquitin from a conjugated protein. They display similar catalytic domains containing conserved Cys and His boxes but divergent N-terminal and occasionally C-terminal extensions, which are thought to function in substrate recognition, subcellular localization, and protein-protein interactions.

References

Puente, X.S., et al., Nat. Rev. Genet. 4(7):544-558 (2003).
Cai, S.Y., et al., Proc. Natl. Acad. Sci. U.S.A. 96(6):2828-2833 (1999).
D'Andrea, A., et al., Crit. Rev. Biochem. Mol. Biol. 33(5):337-352 (1998).

Images

Western blot analysis of anti-USP16 Pab (Cat. #AP2144c) in HL60 cell line lysate (35ug/lane). USP16(arrow) was detected using the purified Pab.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.