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USP16 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP2144a

Specification

USP16 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession	Q9Y5T5
Other Accession	Q5VKN8

USP16 Antibody (N-term) Blocking Peptide - 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
The synthetic peptide sequence used to generate the antibody AP2144a was selected from the N-term region of human USP16 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

USP16 Antibody (N-term) Blocking Peptide - 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

USP16 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

USP16 Antibody (N-term) Blocking Peptide - Images

USP16 Antibody (N-term) Blocking Peptide - 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.

USP16 Antibody (N-term) Blocking Peptide - 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).