10320 Camino Santa Fe, Suite G
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USP20 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP2146b

Specification

USP20 Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	Q9Y2K6
Other Accession	A7Z056, NP_006667
Reactivity	**Mouse**
Predicted	**Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**102003**
Antigen Region	**814-844**

USP20 Antibody (C-term) - Additional Information

Gene ID 10868

Other Names
Ubiquitin carboxyl-terminal hydrolase 20, Deubiquitinating enzyme 20, Ubiquitin thioesterase 20, Ubiquitin-specific-processing protease 20, VHL-interacting deubiquitinating enzyme 2, hVDU2, USP20, KIAA1003, LSFR3A, VDU2

Target/Specificity
This USP20 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 814-844 amino acids from the C-terminal region of human USP20.

Dilution
WB~~1:1000
IHC-P~~1:10~50

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
USP20 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

USP20 Antibody (C-term) - Protein Information

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Name USP20

Synonyms KIAA1003, LSFR3A, VDU2

Function Deubiquitinating enzyme that plays a role in many cellular processes including autophagy, cellular antiviral response or membrane protein biogenesis (PubMed:27801882, PubMed:29487085). Attenuates TLR4- mediated NF-kappa-B signaling by cooperating with beta-arrestin-2/ARRB2 and inhibiting TRAF6 autoubiquitination (PubMed:26839314). Promotes cellular antiviral responses by deconjugating 'Lys-33' and 'Lys-48'- linked ubiquitination of STING1 leading to its stabilization (PubMed:27801882). Plays an essential role in autophagy induction by regulating the ULK1 stability through deubiquitination of ULK1 (PubMed:29487085). Acts as a positive regulator for NF-kappa-B activation by TNF-alpha through deubiquitinating 'Lys-48'-linked polyubiquitination of SQSTM1, leading to its increased stability (PubMed:32354117). Acts as a regulator of G-protein coupled receptor (GPCR) signaling by mediating the deubiquitination beta-2 adrenergic receptor (ADRB2)(PubMed:19424180). Plays a central role in ADRB2 recycling and resensitization after prolonged agonist stimulation by constitutively binding ADRB2, mediating deubiquitination of ADRB2 and inhibiting lysosomal trafficking of ADRB2. Upon dissociation, it is probably transferred to the translocated beta-arrestins, possibly leading to beta-arrestins deubiquitination and disengagement from ADRB2 (PubMed:19424180). This suggests the existence of a dynamic exchange between the ADRB2 and beta-arrestins. Deubiquitinates DIO2, thereby regulating thyroid hormone regulation. Deubiquitinates HIF1A, leading to stabilize HIF1A and enhance HIF1A-mediated activity (PubMed:15776016). Deubiquitinates MCL1, a pivotal member of the anti- apoptotic Bcl-2 protein family to regulate its stability (PubMed:35063767). Within the endoplasmic reticulum, participates with USP33 in the rescue of post-translationally targeted membrane proteins that are inappropriately ubiquitinated by the cytosolic protein quality control in the cytosol (PubMed:33792613).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:Q8C6M1}. Endoplasmic reticulum. Cytoplasm, perinuclear region. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome

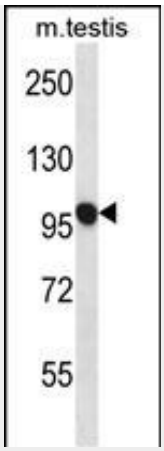
USP20 Antibody (C-term) - Protocols

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

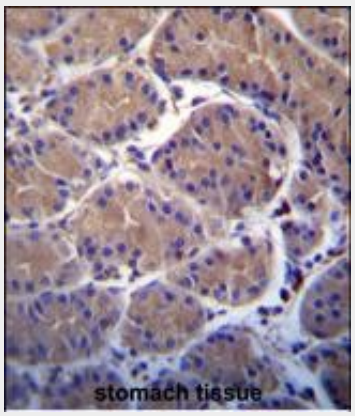
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

USP20 Antibody (C-term) - Images

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USP20 Antibody (E828) (Cat. #AP2146b) western blot analysis in mouse testis tissue lysates (35ug/lane).This demonstrates the USP20 antibody detected the USP20 protein (arrow).



USP20 Antibody (C-term) (Cat. #AP2146b)immunohistochemistry analysis in formalin fixed and paraffin embedded human stomach tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of USP20 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.

USP20 Antibody (C-term) - 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.

USP20 Antibody (C-term) - References

Nagase, T., et al., DNA Res. 6(1):63-70 (1999).
Gilley, J., et al., Hum. Mol. Genet. 8(7):1313-1320 (1999).