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KD-Validated Anti-Ubiquitin Specific Peptidase 5 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1747

Product Information

Application	WB, FC, ICC
Primary Accession	P45974
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	24GB2480
Calculated MW	95786
Gene Name	USP5
Aliases	USP5; Ubiquitin Specific Peptidase 5; Isopeptidase T; IsoT; Ubiquitin-Specific-Processing Protease 5; Ubiquitin Carboxyl-Terminal Hydrolase 5; Deubiquitinating Enzyme 5; Ubiquitin Thioesterase 5; Ubiquitin-Specific Protease-5 (Ubiquitin Isopeptidase T); Ubiquitin Specific Peptidase 5 (Isopeptidase T); Ubiquitin Specific Protease 5 (Isopeptidase T); Testicular Tissue Protein Li 218; Ubiquitin Thiolesterase 5; Ubiquitin Isopeptidase T; EC 3.4.19.12; EC 3.1.2.15; ISOT
Immunogen	A synthesized peptide derived from human USP5

Additional Information

Gene ID	8078
Other Names	Ubiquitin carboxyl-terminal hydrolase 5, 3.4.19.12, Deubiquitinating enzyme 5, Isopeptidase T, Ubiquitin thioesterase 5, Ubiquitin-specific-processing protease 5, USP5, ISOT

Protein Information

Name	USP5
Synonyms	ISOT
Function	Deubiquitinating enzyme that participates in a wide range of cellular processes by specifically cleaving isopeptide bonds between ubiquitin and substrate proteins or ubiquitin itself. Affects thereby important cellular signaling pathways such as NF-kappa-B, Wnt/beta- catenin, and cytokine production by regulating ubiquitin-dependent protein degradation. Participates in the activation of the Wnt signaling pathway by promoting FOXM1 deubiquitination and stabilization that induces the recruitment of beta-catenin to Wnt target gene promoter (PubMed:26912724). Regulates the assembly and disassembly of heat-induced stress granules by mediating the

	hydrolysis of unanchored ubiquitin chains (PubMed:29567855). Promotes lipopolysaccharide-induced apoptosis and inflammatory response by stabilizing the TXNIP protein (PubMed:37534934). Affects T-cell biology by stabilizing the inhibitory receptor on T-cells PDC1 (PubMed:37208329). Acts as a negative regulator of autophagy by regulating ULK1 at both protein and mRNA levels (PubMed:37607937). Acts also as a negative regulator of type I interferon production by simultaneously removing both 'Lys-48'-linked unanchored and 'Lys-63'-linked anchored polyubiquitin chains on the transcription factor IRF3 (PubMed:39761299). Modulates the stability of DNA mismatch repair protein MLH1 and counteracts the effect of the ubiquitin ligase UBR4 (PubMed:39032648). Upon activation by insulin, it gets phosphorylated through mTORC1-mediated phosphorylation to enhance YTHDF1 stability by removing 'Lys-11'-linked polyubiquitination (PubMed:39900921). May also deubiquitinate other substrates such as the calcium channel CACNA1H (By similarity).
Cellular Location	Cytoplasm. Cytoplasm, Stress granule. Nucleus

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