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KD-Validated Anti-Ubiquitin specific peptidase 13 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1417

Product Information

Application	WB, FC, ICC
Primary Accession	Q92995
Reactivity	Rat, Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB4250
Calculated MW	97327
Gene Name	USP13
Aliases	USP13; Ubiquitin Specific Peptidase 13; Ubiquitin Specific Protease 13 (Isopeptidase T-3); Ubiquitin-Specific-Processing Protease 13; Ubiquitin Carboxyl-Terminal Hydrolase 13; Deubiquitinating Enzyme 13; Ubiquitin Thioesterase 13; Isopeptidase T-3; IsoT-3; ISOT-3; ISOT3; Ubiquitin Specific Peptidase 13 (Isopeptidase T-3); Ubiquitin Thiolesterase 13; EC 3.4.19.12; EC 3.1.2.15
Immunogen	A synthesized peptide derived from human USP13

Additional Information

Gene ID	8975
Other Names	Ubiquitin carboxyl-terminal hydrolase 13, 3.4.19.12, Deubiquitinating enzyme 13, Isopeptidase T-3, ISOT-3, Ubiquitin thioesterase 13, Ubiquitin-specific-processing protease 13, USP13, ISOT3

Protein Information

Name	USP13
Synonyms	ISOT3
Function	Deubiquitinase that mediates deubiquitination of target proteins such as BECN1, MITF, SKP2 and USP10 and is involved in various processes such as autophagy, endoplasmic reticulum-associated degradation (ERAD), cell cycle progression or DNA damage response (PubMed:21571647, PubMed:32772043, PubMed:33592542). Component of a regulatory loop that controls autophagy and p53/TP53 levels: mediates deubiquitination of BECN1, a key regulator of autophagy, leading to stabilize the PIK3C3/VPS34-containing complexes. Alternatively, forms with NEDD4 a deubiquitination complex, which subsequently stabilizes VPS34 to promote autophagy (PubMed:32101753). Also deubiquitinates USP10, an essential

regulator of p53/TP53 stability. In turn, PIK3C3/VPS34-containing complexes regulate USP13 stability, suggesting the existence of a regulatory system by which PIK3C3/VPS34-containing complexes regulate p53/TP53 protein levels via USP10 and USP13. Recruited by nuclear UFD1 and mediates deubiquitination of SKP2, thereby regulating endoplasmic reticulum-associated degradation (ERAD). Also regulates ERAD through the deubiquitination of UBL4A a component of the BAG6/BAT3 complex. Mediates stabilization of SIAH2 independently of deubiquitinase activity: binds ubiquitinated SIAH2 and acts by impairing SIAH2 autoubiquitination. Regulates the cell cycle progression by stabilizing cell cycle proteins such as SKP2 and AURKB (PubMed:32772043). In addition, plays an important role in maintaining genomic stability and in DNA replication checkpoint activation via regulation of RAP80 and TOPBP1 (PubMed:33592542). Deubiquitinates the multifunctional protein HMGB1 and subsequently drives its nucleocytoplasmic localization and its secretion (PubMed:36585612). Positively regulates type I and type II interferon signalings by deubiquitinating STAT1 but negatively regulates antiviral response by deubiquitinating STING1 (PubMed:23940278, PubMed:28534493).

Cellular Location Cytoplasm.

Tissue Location Highly expressed in ovary and testes.

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