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UBR4 Rabbit pAb

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Catalog # AP56557

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	Q5T4S7
Predicted	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	573841
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human UBR4
Epitope Specificity	3001-3200/5183
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Membrane Curated; Multi-pass membrane protein; Cytoplasm; cytoskeleton; Nucleus
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The protein encoded by this gene is an E3 ubiquitin-protein ligase that interacts with the retinoblastoma-associated protein in the nucleus and with calcium-bound calmodulin in the cytoplasm. The encoded protein appears to be a cytoskeletal component in the cytoplasm and part of the chromatin scaffold in the nucleus. In addition, this protein is a target of the human papillomavirus type 16 E7 oncoprotein. [provided by RefSeq, Aug 2010]

Additional Information

Gene ID	23352
Other Names	E3 ubiquitin-protein ligase UBR4, 2.3.2.27, 600 kDa retinoblastoma protein-associated factor, p600, N-recognin-4, Retinoblastoma-associated factor of 600 kDa, RBAF600, UBR4 {ECO:0000303|PubMed:35032865, ECO:0000312|HGNC:HGNC:30313}
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	UBR4 {ECO:0000303|PubMed:35032865, ECO:0000312|HGNC:HGNC:30313}
Function	E3 ubiquitin-protein ligase involved in different protein quality control pathways in the cytoplasm (PubMed:25582440, PubMed:29033132, PubMed:34893540, PubMed:37891180, PubMed:38030679, PubMed:38182926, PubMed:38297121). Component of the N-end rule pathway: ubiquitinates proteins bearing specific N-terminal residues that are destabilizing according to the N-end rule, leading to their degradation (PubMed:34893540, PubMed:37891180, PubMed:38030679). Recognizes both type-1 and type-2 N-degrons, containing positively charged amino acids (Arg, Lys and His) and bulky and hydrophobic amino acids, respectively (PubMed:38030679). Does not ubiquitinate proteins that are acetylated at the N-terminus (PubMed:37891180). Together with UBR5, part of a cytoplasm protein quality control pathway that prevents protein aggregation by catalyzing assembly of heterotypic 'Lys-11'-/'Lys-48'- linked branched ubiquitin chains on aggregated proteins, leading to substrate recognition by the segregase p97/VCP and degradation by the proteasome: UBR4 probably synthesizes mixed chains containing multiple linkages, while UBR5 is likely branching multiple 'Lys-48'-linked chains of substrates initially modified (PubMed:29033132). Together with KCMF1, part of a protein quality control pathway that catalyzes ubiquitination and degradation of proteins that have been oxidized in response to reactive oxygen species (ROS): recognizes proteins with an Arg-CysO3(H) degron at the N-terminus, and mediates assembly of heterotypic 'Lys-63'-/'Lys-27'-linked branched ubiquitin chains on oxidized proteins, leading to their degradation by autophagy (PubMed:34893540). Catalytic component of the silencing factor of the integrated stress response (SIFI) complex, a multiprotein complex that turns off the mitochondrial stress response after a specific stress event has been resolved (PubMed:38297121, PubMed:40328314, PubMed:40875847). The SIFI complex ubiquitinates and degrades (1) components of the HRI-mediated signaling of the integrated stress response, such as DELE1 and EIF2AK1/HRI, as well as (2) unimported mitochondrial precursors such as ABHD10 (PubMed:38297121, PubMed:40328314). Within the SIFI complex, UBR4 initiates ubiquitin chains that are further elongated or branched by KCMF1 (PubMed:38297121, PubMed:40328314, PubMed:40875847). Mediates ubiquitination of ACLY, leading to its subsequent degradation (PubMed:23932781). Together with clathrin, forms meshwork structures involved in membrane morphogenesis and cytoskeletal organization (PubMed:16214886).
Cellular Location	Cytoplasm. Cytoplasm, cytoskeleton. Endosome {ECO:0000250|UniProtKB:A2AN08}. Nucleus {ECO:0000250|UniProtKB:A2AN08} Note=Localizes to endosomes via its association with calcium-bound calmodulin (By similarity). Concentrates at the leading edge of membrane structures involved in actin motility (PubMed:16214886) {ECO:0000250|UniProtKB:A2AN08, ECO:0000269|PubMed:16214886}

Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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