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RNF45 Rabbit pAb

Catalog # AP97387

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9UKV5
Other Accession	Q9UKV5
Reactivity	Rat
Predicted	Human, Mouse, Rabbit, Chicken, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	72996
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human AMFR/RNF45
Epitope Specificity	85-180/643
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 CUE domain.Contains 1 RING-type zinc finger.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	E3 ubiquitin-protein ligase which can target both itself and other proteins including CD3D and APOB for proteasomal degradation. Mediates polyubiquitination of CYP3A4. Specific receptor for the autocrine motility factor. Mediates tumor invasion and metastasis. Component of a complex required to couple deglycosylation and proteasome-mediated degradation of misfolded proteins in the endoplasmic reticulun that are retrotranslocated in the cytosol. Promotes ubiquitination of misfolded proteins such as mutant CFTR; proposed to mediate sequential ubiquitination by recognizing already ubiquitin-conjugated substrates and to cooperate with E3 ubiquitin-protein ligase RNF5.

Additional Information

Gene ID	267
Other Names	GP78; RNF45; SPG89; AMFR_HUMAN; AMFR; Autocrine motility factor receptor (AMF receptor); RING finger protein 45; 2.3.2.36; AMFR_MOUSE; RING-type E3 ubiquitin transferase AMFR; autocrine motility factor receptor
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	AMFR {ECO:0000303|PubMed:10456327, ECO:0000312|HGNC:HGNC:463}
Function	E3 ubiquitin-protein ligase that mediates the polyubiquitination of lysine and cysteine residues on target proteins, such as CD3D, CYP3A4, CFTR, INSIG1, SOAT2/ACAT2 and APOB for proteasomal degradation (PubMed:10456327, PubMed:11724934, PubMed:12670940, PubMed:19103148, PubMed:24424410, PubMed:28604676). Component of a VCP/p97-AMFR/gp78 complex that participates in the final step of endoplasmic reticulum-associated degradation (ERAD) (PubMed:10456327, PubMed:11724934, PubMed:19103148, PubMed:24424410). The VCP/p97-AMFR/gp78 complex is involved in the sterol-accelerated ERAD degradation of HMGCR through binding to the HMGCR-INSIG1 complex at the ER membrane (PubMed:16168377, PubMed:22143767). In addition, interaction of AMFR with AUP1 facilitates interaction of AMFR with ubiquitin-conjugating enzyme UBE2G2 and ubiquitin ligase RNF139, leading to sterol-induced HMGCR ubiquitination (PubMed:23223569). The ubiquitinated HMGCR is then released from the ER into the cytosol for subsequent destruction (PubMed:16168377, PubMed:22143767, PubMed:23223569). In addition to ubiquitination on lysine residues, catalyzes ubiquitination on cysteine residues: together with INSIG1, mediates polyubiquitination of SOAT2/ACAT2 at 'Cys-277', leading to its degradation when the lipid levels are low (PubMed:28604676). Catalyzes ubiquitination and subsequent degradation of INSIG1 when cells are depleted of sterols (PubMed:17043353). Mediates polyubiquitination of INSIG2 at 'Cys-215' in some tissues, leading to its degradation (PubMed:31953408). Also regulates ERAD through the ubiquitination of UBL4A a component of the BAG6/BAT3 complex (PubMed:21636303). Also acts as a scaffold protein to assemble a complex that couples ubiquitination, retranslocation and deglycosylation (PubMed:21636303). Mediates tumor invasion and metastasis as a receptor for the GPI/autocrine motility factor (PubMed:10456327). In association with LMBR1L and UBAC2, negatively regulates the canonical Wnt signaling pathway in the lymphocytes by promoting the ubiquitin-mediated degradation of CTNNB1 and Wnt receptors FZD6 and LRP6 (PubMed:31073040). Regulates NF-kappa-B and MAPK signaling pathways by mediating 'Lys-27'-linked polyubiquitination of TAB3 and promoting subsequent TAK1/MAP3K7 activation (PubMed:36593296). Required for proper lipid homeostasis (PubMed:37119330).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein. Note=Palmitoylation promotes localization to the peripheral endoplasmic reticulum
Tissue Location	Widely expressed..

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