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RNF111 Rabbit pAb

Catalog # AP98553

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q6ZNA4
Other Accession	Q6ZNA4
Reactivity	Rat, Mouse
Predicted	Human, Rabbit, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	108862
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human RNF111
Epitope Specificity	851-950/994
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 RING-type zinc finger.
SUBUNIT	Interacts with SMAD6, SMAD7, AXIN1, AXIN2 and SKIL isoform SNON. Part of a complex containing RNF111, AXIN1 and SMAD7. Interacts (via SIM domains) with SUMO1 and SUMO2.
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 a nuclear RING-domain containing E3 ubiquitin ligase. This protein interacts with the transforming growth factor (TGF) -beta/NODAL signaling pathway by promoting the ubiquitination and proteosomal degradation of negative regulators, like SMAD proteins, and thereby enhances TGF-beta target-gene transcription. As a modulator of the nodal signaling cascade, this gene plays a critical role in the induction of mesoderm during embryonic development. Alternative splicing of this gene results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2012]

Additional Information

Gene ID	54778
Other Names	ARK; hRNF111; RN111_HUMAN; RNF111; RING finger protein 111 (hRNF111); RING-type E3 ubiquitin transferase Arkadia; 2.3.2.27; ring finger protein 111
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	RNF111 (HGNC:17384)
Function	E3 ubiquitin-protein ligase (PubMed: 26656854). Required for mesoderm patterning during embryonic development (By similarity). Acts as an enhancer of the transcriptional responses of the SMAD2/SMAD3 effectors, which are activated downstream of BMP (PubMed:14657019, PubMed:16601693). Acts by mediating ubiquitination and degradation of SMAD inhibitors such as SMAD7, inducing their proteasomal degradation and thereby enhancing the transcriptional activity of TGF-beta and BMP (PubMed:14657019, PubMed:16601693). In addition to enhance transcription of SMAD2/SMAD3 effectors, also regulates their turnover by mediating their ubiquitination and subsequent degradation, coupling their activation with degradation, thereby ensuring that only effectors 'in use' are degraded (By similarity). Activates SMAD3/SMAD4-dependent transcription by triggering signal-induced degradation of SNON isoform of SKIL (PubMed:17591695). Associates with UBE2D2 as an E2 enzyme (PubMed:22411132). Specifically binds polysumoylated chains via SUMO interaction motifs (SIMs) and mediates ubiquitination of sumoylated substrates (PubMed:23751493). Catalyzes 'Lys-63'-linked ubiquitination of sumoylated XPC in response to UV irradiation, promoting nucleotide excision repair (PubMed:23751493). Mediates ubiquitination and degradation of sumoylated PML (By similarity). The regulation of the BMP-SMAD signaling is however independent of sumoylation and is not dependent of SUMO interaction motifs (SIMs) (By similarity).
Cellular Location	Nucleus. Cytoplasm Nucleus, PML body {ECO:0000250|UniProtKB:Q99ML9}. Note=Upon TGF-beta treatment, translocates from nucleus to cytosol
Tissue Location	Broadly expressed..

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