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RNF4 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP16278b

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P78317
Other Accession	NP_001171939.1, NP_001171938.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	21319
Antigen Region	95-123

Additional Information

Gene ID	6047
Other Names	E3 ubiquitin-protein ligase RNF4, 632-, RING finger protein 4, Small nuclear ring finger protein, Protein SNURF, RNF4, SNURF
Target/Specificity	This RNF4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 95-123 amino acids from the C-terminal region of human RNF4.
Dilution	WB~~1:1000 IHC-P~~1:250 FC~~1:25 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RNF4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RNF4 {ECO:0000303|PubMed:15815621, ECO:0000312|HGNC:HGNC:10067}
Function	E3 ubiquitin-protein ligase which binds polysumoylated chains covalently attached to proteins and mediates 'Lys-6'-, 'Lys-11'-, 'Lys- 48'- and 'Lys-63'-linked polyubiquitination of those substrates and their subsequent

	targeting to the proteasome for degradation (PubMed:18408734, PubMed:19307308, PubMed:35013556). Regulates the degradation of several proteins including PML and the transcriptional activator PEA3 (PubMed:18408734, PubMed:19307308, PubMed:20943951). Involved in chromosome alignment and spindle assembly, it regulates the kinetochore CENPH-CENPI-CENPK complex by targeting polysumoylated CENPI to proteasomal degradation (PubMed:20212317). Regulates the cellular responses to hypoxia and heat shock through degradation of respectively EPAS1 and PARP1 (PubMed:19779455, PubMed:20026589). Alternatively, it may also bind DNA/nucleosomes and have a more direct role in the regulation of transcription for instance enhancing basal transcription and steroid receptor-mediated transcriptional activation (PubMed:12885770). Catalyzes ubiquitination of sumoylated PARP1 in response to PARP1 trapping to chromatin, leading to PARP1 removal from chromatin by VCP/p97 (PubMed:35013556).
Cellular Location	Cytoplasm. Nucleus. Nucleus, PML body
Tissue Location	Widely expressed at low levels in many tissues; highly expressed in testis.

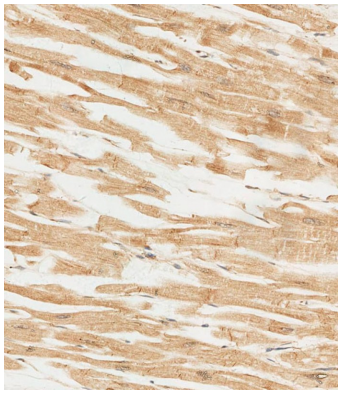
Background

The protein encoded by this gene contains a RING finger motif and acts as a transcription regulator. This protein has been shown to interact with, and inhibit the activity of, TRPS1, a transcription suppressor of GATA-mediated transcription. Transcription repressor ZNF278/PATZ is found to interact with this protein, and thus reduce the enhancement of androgen receptor-dependent transcription mediated by this protein. Studies of the mouse and rat counterparts suggested a role of this protein in spermatogenesis. A pseudogene of this gene is found on chromosome 1.

References

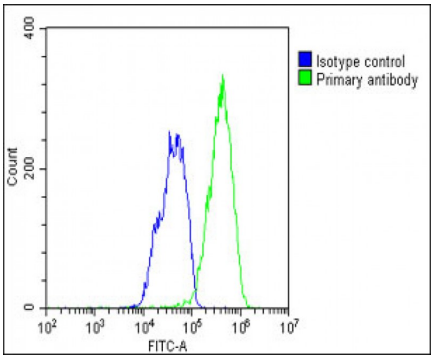
Hu, X.V., et al. Proc. Natl. Acad. Sci. U.S.A. 107(34):15087-15092(2010)
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Salonen, J., et al. Mol. Cell. Endocrinol. 307 (1-2), 205-210 (2009) :
Percherancier, Y., et al. J. Biol. Chem. 284(24):16595-16608(2009)
Tatham, M.H., et al. Nat. Cell Biol. 10(5):538-546(2008)

Images

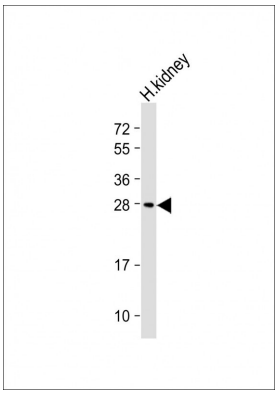


AP16278b staining RNF4 in human heart tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Samples were incubated with primary antibody (1/250) for 1 hours at room temperature. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

Overlay histogram showing HepG2 cells stained with AP16278b(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in



2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP16278b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



Anti-RNF4 Antibody (C-term) at 1:2000 dilution + Human kidney lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 21 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Targeting HDAC3 to overcome the resistance to ATRA or arsenic in acute promyelocytic leukemia through ubiquitination and degradation of PML-RARα
- TRIB3 Promotes APL Progression through Stabilization of the Oncoprotein PML-RARα and Inhibition of p53-Mediated Senescence.
- SENP3 regulates the global protein turnover and the Sp1 level via antagonizing SUMO2/3-targeted ubiquitination and degradation.