10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RNF7 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21564a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9UBF6
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Chicken
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB52911
Calculated MW	12683

Additional Information

Gene ID	9616
Other Names	RING-box protein 2, Rbx2, CKII beta-binding protein 1, CKBBP1, RING finger protein 7, Regulator of cullins 2, Sensitive to apoptosis gene protein, RNF7, RBX2, ROC2, SAG
Target/Specificity	This RNF7 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 25-57 amino acids from the N-terminal region of human RNF7.
Dilution	WB~~1:8000 IHC-P~~1:100~500 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	RNF7 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RNF7 (HGNC:10070)
Function	Catalytic component of multiple cullin-5-RING E3 ubiquitin- protein ligase complexes (ECS complexes), which mediate the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:21980433,

PubMed:33268465, PubMed:38418882, PubMed:38574733, PubMed:35512830, PubMed:40440427, PubMed:40963025). It is thereby involved in various biological processes, such as cell cycle progression, signal transduction and transcription (PubMed:21980433, PubMed:33268465, PubMed:38418882, PubMed:38574733). The functional specificity of the E3 ubiquitin-protein ligase ECS complexes depend on the variable SOCS box-containing substrate recognition component (PubMed:21980433, PubMed:33268465). Within ECS complexes, RNF7/RBX2 recruits the E2 ubiquitination enzyme to the complex via its RING-type and brings it into close proximity to the substrate (PubMed:34518685). Catalytic subunit of various SOCS-containing ECS complexes, such as the ECS(SOCS7) complex, that regulate reelin signaling by mediating ubiquitination and degradation of DAB1 (By similarity). The ECS(SOCS2) complex mediates the ubiquitination and subsequent proteasomal degradation of phosphorylated EPOR and GHR (PubMed:21980433, PubMed:25505247). Promotes ubiquitination and degradation of NF1, thereby regulating Ras protein signal transduction (By similarity). As part of the ECS(ASB9) complex, catalyzes ubiquitination and degradation of CKB (PubMed:33268465). The ECS(SPSB3) complex catalyzes ubiquitination of nuclear CGAS (PubMed:38418882). As part of the ECS(RAB40C) complex, mediates ANKRD28 ubiquitination and degradation, thereby inhibiting protein phosphatase 6 (PP6) complex activity and focal adhesion assembly during cell migration (PubMed:35512830). The ECS(ASB7) complex acts a negative regulator of H3K9me3 histone mark by mediating ubiquitination and degradation of SUV39H1 (PubMed:40440427). As part of some ECS complex, catalyzes 'Lys-11'-linked ubiquitination and degradation of BTRC (PubMed:27910872). ECS complexes and ARIH2 collaborate in tandem to mediate ubiquitination of target proteins; ARIH2 mediating addition of the first ubiquitin on CRLs targets (PubMed:34518685, PubMed:38418882). As part of the ECS(LRRC58) complex, mediates CDO1 ubiquitination and degradation, regulating cysteine catabolism (PubMed:40963025). Specifically catalyzes the neddylation of CUL5 via its interaction with UBE2F (PubMed:19250909). Does not catalyze neddylation of other cullins (CUL1, CUL2, CUL3, CUL4A or CUL4B) (PubMed:19250909). May play a role in protecting cells from apoptosis induced by redox agents (PubMed:10082581).

Cellular Location Cytoplasm. Nucleus

Tissue Location Expressed in heart, liver, skeletal muscle and pancreas. At very low levels expressed in brain, placenta and lung

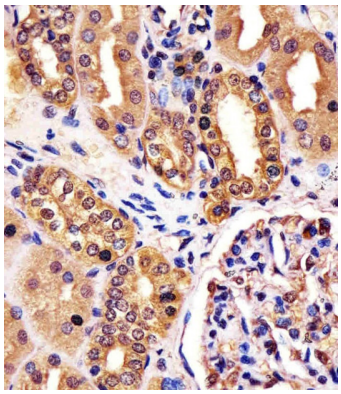
Background

Probable component of the SCF (SKP1-CUL1-F-box protein) E3 ubiquitin ligase complex which mediates the ubiquitination and subsequent proteasomal degradation of target proteins involved in cell cycle progression, signal transduction and transcription. Through the RING-type zinc finger, seems to recruit the E2 ubiquitination enzyme to the complex and brings it into close proximity to the substrate. Promotes the neddylation of CUL5 via its interaction with UBE2F. May play a role in protecting cells from apoptosis induced by redox agents.

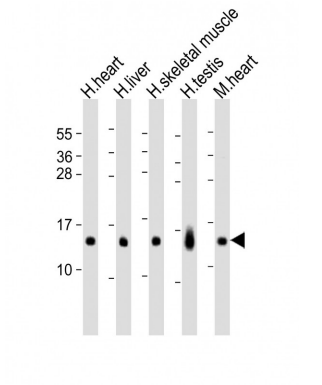
References

Son M.-Y.,et al.Biochem. Biophys. Res. Commun. 263:743-748(1999).
Ohta T.,et al.Mol. Cell 3:535-541(1999).
Duan H.,et al.Mol. Cell. Biol. 19:3145-3155(1999).
Swaroop M.,et al.DNA Cell Biol. 20:425-434(2001).
Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.

Images



AP21564a staining RNF7 in human kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



All lanes : Anti-RNF7 Antibody (N-term) at 1:8000 dilution Lane 1: human heart lysates Lane 2: human liver lysates Lane 3: human skeletal muscle lysates Lane 4: human testis lysates Lane 5: mouse heart lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 13 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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