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RBX1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20572a

Product Information

Application	WB, IF, IHC-P, E
Primary Accession	P62877
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB48352
Calculated MW	12274

Additional Information

Gene ID	9978
Other Names	E3 ubiquitin-protein ligase RBX1, 632-, Protein ZYP, RING finger protein 75, RING-box protein 1, Rbx1, Regulator of cullins 1, E3 ubiquitin-protein ligase RBX1, N-terminally processed, RBX1, RNF75, ROC1
Target/Specificity	This RBX1 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 74-108 amino acids from the C-terminal region of human RBX1.
Dilution	WB~~1:2000 IF~~1:25 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	RBX1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RBX1 (HGNC:9928)
Function	E3 ubiquitin ligase component of multiple cullin-RING-based E3 ubiquitin-protein ligase (CRLs) complexes which mediate the ubiquitination

and subsequent proteasomal degradation of target proteins, including proteins involved in cell cycle progression, signal transduction, transcription and transcription-coupled nucleotide excision repair (PubMed:10230407, PubMed:10579999, PubMed:11961546, PubMed:15983046, PubMed:16678110, PubMed:19112177, PubMed:19679664, PubMed:22748924, PubMed:23455478, PubMed:27565346, PubMed:29769719, PubMed:32355176, PubMed:33417871, PubMed:37844242, PubMed:38326650, PubMed:39504960, PubMed:39667934, PubMed:38316879). CRLs complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins, ARIH1 mediating addition of the first ubiquitin on CRLs targets (PubMed:27565346). The functional specificity of the E3 ubiquitin-protein ligase complexes depends on the variable substrate recognition components. As a component of the CSA complex mediates ubiquitination of Pol II subunit POLR2A at 'Lys-1268', a critical TC- NER checkpoint (PubMed:32355176, PubMed:34526721). Core component of the Cul7-RING(FBXW8) ubiquitin ligase complex, which mediates the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:35982156). Core component of a Cul9-RING ubiquitin ligase complex composed of CUL9 and RBX1, which mediates mono- ubiquitination of p53/TP53 (PubMed:38605244). Recruits the E2 ubiquitin-conjugating enzyme CDC34 to the complex and brings it into close proximity to the substrate. Probably also stimulates CDC34 autoubiquitination. May be required for histone H3 and histone H4 ubiquitination in response to ultraviolet and for subsequent DNA repair. Promotes the neddylation of CUL1, CUL2, CUL4 and CUL4 via its interaction with UBE2M. Involved in the ubiquitination of KEAP1, ENC1 and KLHL41. In concert with ATF2 and CUL3, promotes degradation of KAT5 thereby attenuating its ability to acetylate and activate ATM. As part of a multisubunit complex composed of elongin BC complex (ELOB and ELOC), elongin A/ELOA, RBX1 and CUL5; polyubiquitinates monoubiquitinated POLR2A (PubMed:19920177).

Cellular Location Cytoplasm. Nucleus

Tissue Location Widely expressed.

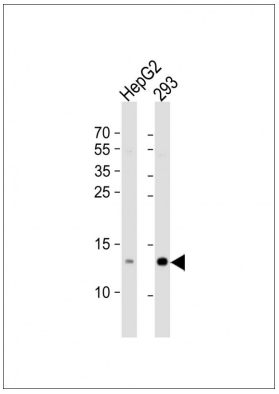
Background

E3 ubiquitin ligase component of multiple cullin-RING- based E3 ubiquitin-protein ligase complexes which mediate the ubiquitination and subsequent proteasomal degradation of target proteins, including proteins involved in cell cycle progression, signal transduction, transcription and transcription-coupled nucleotide excision repair. The functional specificity of the E3 ubiquitin-protein ligase complexes depends on the variable substrate recognition components. As a component of the CSA complex promotes the ubiquitination of ERCC6 resulting in proteasomal degradation. Through the RING-type zinc finger, seems to recruit the E2 ubiquitination enzyme, like CDC34, to the complex and brings it into close proximity to the substrate. Probably also stimulates CDC34 autoubiquitination. May be required for histone H3 and histone H4 ubiquitination in response to ultraviolet and for subsequent DNA repair. Promotes the neddylation of CUL1, CUL2, CUL4 and CUL4 via its interaction with UBE2M. Involved in the ubiquitination of KEAP1, ENC1 and KLHL41. In concert with ATF2 and CUL3, promotes degradation of KAT5 thereby attenuating its ability to acetylate and activate ATM.

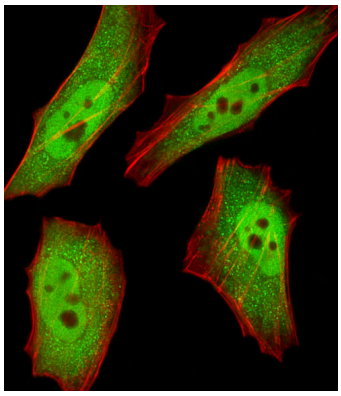
References

Ohta T.,et al.Mol. Cell 3:535-541(1999).
Kamura T.,et al.Science 284:657-661(1999).
Collins J.E.,et al.Genome Biol. 5:R84.1-R84.11(2004).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Dunham I.,et al.Nature 402:489-495(1999).

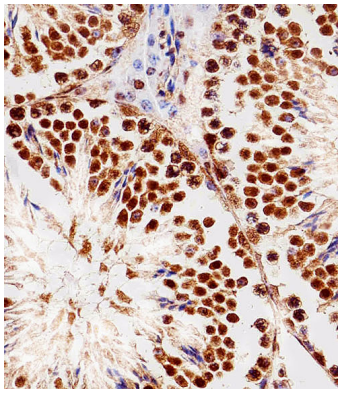
Images



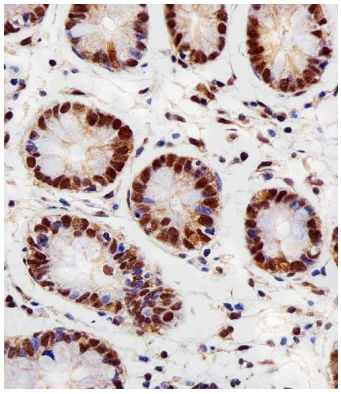
All lanes : Anti-RBX1 Antibody (C-term) at 1:1000 dilution Lane 1: HepG2 whole cell lysate Lane 2: 293 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 12 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Fluorescent image of HeLa cells stained with RBX1 Antibody (C-term)(Cat#AP20572a). AP20572a was diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-rabbit lgG at 1:400 dilution was used as the secondary antibody (green). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).

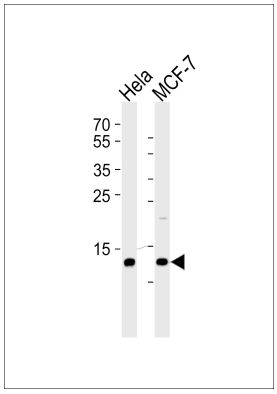


Immunohistochemical analysis of paraffin-embedded M. testis section using RBX1 Antibody (C-term)(Cat#AP20572a). AP20572a was diluted at 1:100 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.



Immunohistochemical analysis of paraffin-embedded H. colon section using RBX1 Antibody (C-term) (Cat#AP20572a). AP20572a was diluted at 1:100 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

Western blot analysis of lysates from Hela, MCF-7 cell line (from left to right), using RBX1 Antibody (C-term)(Cat. #AP20572a). AP20572a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution



was used as the secondary antibody. Lysates at 35ug per lane.

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