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KD-Validated Anti-Ring-Box 1 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI1996

Product Information

Application	WB, FC, ICC
Primary Accession	P62877
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1 kappa
Clone Names	24GB7170
Calculated MW	12274
Gene Name	RBX1
Aliases	RBX1; Ring-Box 1; RNF75; ROC1; Regulator Of Cullins 1; BA554C12.1; E3 Ubiquitin-Protein Transferase RBX1; E3 Ubiquitin-Protein Ligase RBX1; RING Finger Protein 75; RING-Box Protein 1; Ring-Box 1, E3 Ubiquitin Protein Ligase; ZYP Protein; Protein ZYP; EC 2.3.2.27; EC 2.3.2.32; Rbx1
Immunogen	Recombinant protein of human Rbx1

Additional Information

Gene ID	9978
Other Names	E3 ubiquitin-protein ligase RBX1, 2.3.2.27, 2.3.2.32, E3 ubiquitin-protein transferase RBX1, Protein ZYP, RING finger protein 75, RING-box protein 1, Rbx1, Regulator of cullins 1, ROC1, E3 ubiquitin-protein ligase RBX1, N-terminally processed, E3 ubiquitin-protein transferase RBX1, N-terminally processed, RBX1 (HGNC:9928)

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.

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