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

Mouse monoclonal antibody
Catalog # AGI1996

Specification

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

Application	**WB, FC, ICC**
Primary Accession	P62877
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1 kappa**
Calculated MW	**Predicted, 12 kDa, observed, 17 kDa KDa**
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**

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

KD-Validated Anti-Ring-Box 1 Mouse Monoclonal Antibody - 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:<a

href="http://www.uniprot.org/citations/19679664" target="_blank">19679664, PubMed:22748924, PubMed:23455478, PubMed:27565346, PubMed:29769719, PubMed:32355176, PubMed:33417871, 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.

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

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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

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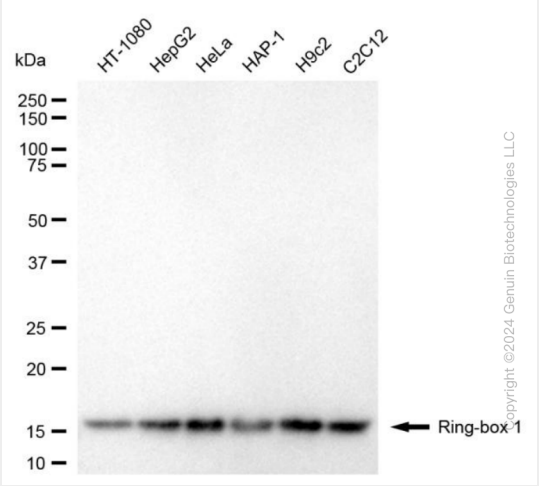
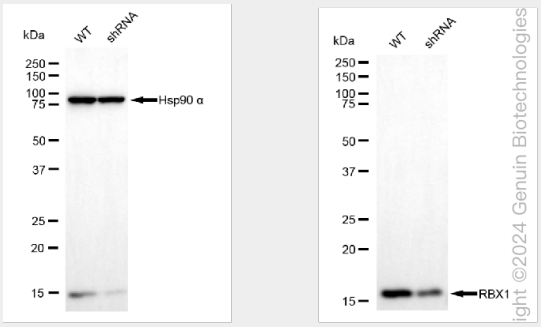
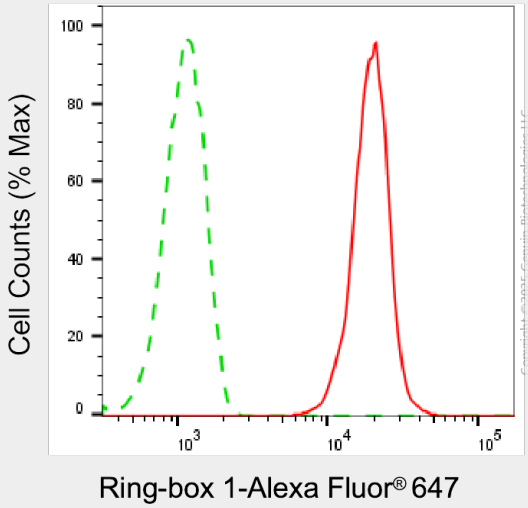


Western blotting analysis using anti-ring-box 1 antibody (Cat#AGI1996). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-ring-box 1 antibody (Cat#AGI1996, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Western blotting analysis using anti-ring-box 1 antibody (Cat#AGI1996). Ring-box 1 expression in wild-type (WT) and ring-box 1 (RBX1) shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-ring-box 1 antibody (Cat#AGI1996, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Flow cytometric analysis of Ring-box 1 expression in C2C12 cells using anti-Ring-box 1 antibody (Cat#AGI1996, 1:2,000). Green, isotype control; red, Ring-box 1.

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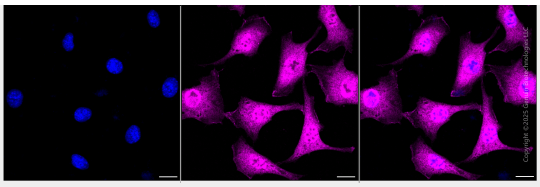

Immunocytochemical staining of C2C12 cells with anti-Ring-box 1 antibody (Cat#AGI1996, 1:1,000). Nuclei were stained blue with DAPI;Ring-box 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain:High. Scale bar, 20 µm.