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

Anti-ROC1 (C-terminal specific) (RABBIT) Antibody

ROC1 Antibody
Catalog # ASR3726

Specification

Anti-ROC1 (C-terminal specific) (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, IHC, E, I, LCI**
Application Note	**This antibody reacts with human ROC1 by western blot and immunoprecipitation. The antibody immunoprecipitates in vitro translated protein and protein from overexpressing cell lysates (using HeLa and NIH-3T3, and others). Coimmunoprecipitation of related cullin proteins does occur. Coimmunoprecipitation of ubiquitin ligase activity will also occur. A 12.2 kDa band corresponding to human ROC1 is detected. Most cell lines expressing ROC1 can be used as a positive control. Researchers should determine optimal titers for other applications.**
Physical State	**Liquid (sterile filtered)**
Immunogen	**This antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 94-108 of Human ROC1 (C-terminal) coupled to KLH.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-ROC1 (C-terminal specific) (RABBIT) Antibody - Additional Information

Gene ID 9978

Other Names
9978

Purity
This product is monospecific antiserum processed by delipidation and defibrination followed by sterile filtration. This product reacts with human, mouse, C.elgans and zebra fish ROC1. Cross reactivity may also occur with ROC1 from other sources. Sufficient sequence differences exist to suggest that this antibody would not react with other RING box proteins such as ROC2 and APC11.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended

storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-ROC1 (C-terminal specific) (RABBIT) 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: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

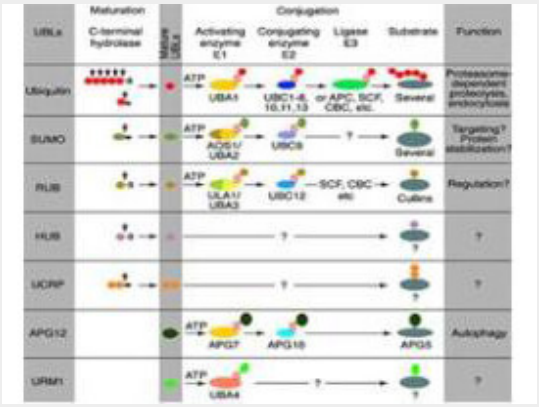
Tissue Location
Widely expressed.

Anti-ROC1 (C-terminal specific) (RABBIT) 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

Anti-ROC1 (C-terminal specific) (RABBIT) Antibody - Images



Most modifiers mature by proteolytic processing from inactive precursors (a; amino acid). Arrowheads point to the cleavage sites. Ubiquitin is expressed either as polyubiquitin or as a fusion with ribosomal proteins. Conjugation requires activating (E1) and conjugating (E2) enzymes that form thiolesters (S) with the modifiers. Modification of cullins by RUB involves SCF(SKP1/cullin-1/F-box protein) /CBC(cullin-2/elongin B/elonginC) -like E3 enzymes that are also involved in ubiquitination. In contrast to ubiquitin, the UBLs do not seem to form multi-UBL chains. UCRP(ISG15) resembles two ubiquitin moieties linked head-to-tail. Whether HUB1 functions as a modifier is currently unclear. APG12 and URM1 are distinct from the other modifiers because they are unrelated in sequence to ubiquitin. Data contributed by S.Jentsch.

Anti-ROC1 (C-terminal specific) (RABBIT) Antibody - Background

ROC1 also known as RING-box protein 1, Rbx1, Regulator of cullins 1, RING finger protein 75, and ZYP protein, is a component of the SCF (SKP1-CUL1-F-box protein) and the CBC(VHL) (CUL2-elonging BC-VHL) E3 ubiquitin ligase complexes, which mediate the ubiquitination and subsequent proteasomal degradation of target proteins involved in cell cycle progression, signal transduction and transcription. ROC1 appears to recruit the E2 ubiquitination enzyme through the RING-type zinc finger in a manner similar to CDC34, and brings it into close proximity to the substrate. The RING-type zinc finger domain is essential for ubiquitin ligase activity. ROC1 probably also stimulates CDC34 autoubiquitination and promotes the neddylation of CUL1 and probably

CUL2. ROC1 has a cytoplasmic and nuclear localization and is widely expressed in most tissues.