

Datasheet for 100-401-A13**ROC1 Antibody****Overview**

Description:	Anti-ROC1 (C-terminal specific) (RABBIT) Antibody - 100-401-A13
Item No.:	100-401-A13
Size:	100 µL
Applications:	WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

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.
Synonyms:	rabbit anti-ROC1 Antibody, Rbx1 antibody, Regulator of Cullins 1 antibody, Ring box 1 antibody, RING box protein 1 antibody, RING finger protein 75 antibody, RING finger protein antibody, Ringbox protein 1 antibody, RNF 75 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	RBX1
Reactivity:	Human

Immunogen Type:	Conjugated Peptide
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.
Purity/Specificity:	This product is monospecific antiserum processed by delipidation and defibrination followed by sterile filtration. This product reacts with human, mouse, C.elegans 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.
Relevant Links:	• UniProtKB - P62877 • NCBI - 7657508 • GenelD - 9978

Application Details

Suggested Applications:	WB (Based on references)
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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:2,000 - 1:10,000
IHC:	User Optimized
WB:	1:500 - 1:1,000

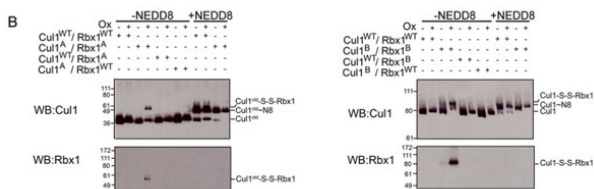
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	85 mg/mL by Refractometry
Buffer:	None
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
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.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

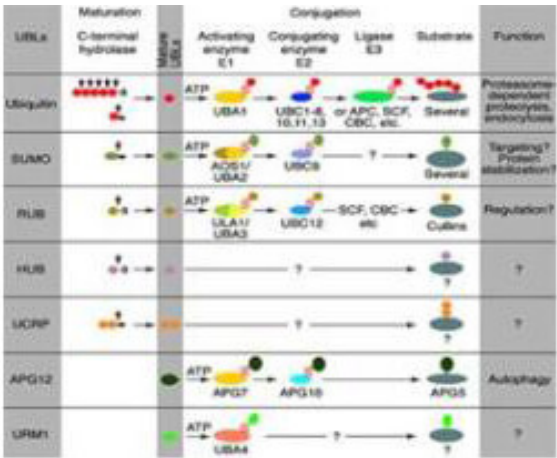
Western Blot of Anti-Rbx1 Antibody.

Probes of Conformational Change in Full-length NEDD8~Cul1ctd-Rbx1.

(B) Western blots probed with anti-Cul1 and anti-Rbx1 after disulfide crosslinking of Cul1 and Rbx1 for unNEDDylated (-NEDD8) and NEDD8ylated (NEDD8) complexes harboring either wild-type or the indicated (A or B) Cys mutants of Cul1 and/or Rbx1. Cys As were in “split ‘n coexpress” Cul1-Rbx1, in which Cul1’s ntd and ctd are copurified as two polypeptides (Zheng et al., 2002b). Cul1 CysB masks the anti-Cul1 C-terminus epitope, and thus CysBs were tested in single polypeptide Cul1 and Rbx1 from insect cells for immunodetection. Fig 4. PMID: 18805092.

Pathway

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 thioesters (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.



References

- Duda DM et al. Structural insights into NEDD8 activation of cullin-RING ligases: conformational control of conjugation. *Cell*. (2008)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.