

**Datasheet for 100-401-A02****Cul2 Antibody****Overview**

<b>Description:</b>	Anti-Cul2 (C-terminal specific) (RABBIT) Antibody - 100-401-A02
<b>Item No.:</b>	100-401-A02
<b>Size:</b>	100 µL
<b>Applications:</b>	IHC, IP, WB, Other
<b>Reactivity:</b>	Human
<b>Host Species:</b>	Rabbit

**Product Details**

**Background:** Anti-Cul2 antibody can be used in western blotting, ELISA and IP. Cullins assemble a potentially large number of ubiquitin ligases by binding to the RING protein ROC1 to catalyse polyubiquitination, as well as binding to various specificity factors to recruit substrates. Cullin 2 is an essential component of the SCF (SKP1-CUL1-F-box protein) E3 ubiquitin ligase complex, which mediates the ubiquitination of proteins involved in cell cycle progression, signal transduction and transcription. In the SCF complex, cul2 serves as a rigid scaffold that organizes the SKP1-F-box protein and RBX1 subunits. Cul2 may also contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme. Cul2 is part of the SCF complex consisting of CUL1, RBX1, SKP1 and SKP2, where it interacts directly with SKP1, SKP2 and RBX1. Cul2 also interacts with RNF7 and is part of a complex with TIP120A/CAND1 and RBX1. The unneddylated form interacts with TIP120A/CAND1 and the interaction negatively regulates the association with SKP1 in the SCF complex.

<b>Synonyms:</b>	rabbit anti-Cul2 Antibody, MGC131970 antibody, CUL, Cullin
<b>Host Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>Format:</b>	Antiserum

**Target Details**

<b>Gene Name:</b>	CUL2
<b>Reactivity:</b>	Human

<b>Immunogen Type:</b>	Conjugated Peptide
<b>Immunogen:</b>	Anti-Cul2 was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the C-Terminus region near amino acids 720-745 of Human Cul2 coupled to KLH.
<b>Purity/Specificity:</b>	Antibody is monospecific antiserum processed by delipidation and defibrination followed by sterile filtration. This product reacts with human Cullin 2. Cross reactivity with Cul2 from other sources has not been determined.
<b>Relevant Links:</b>	<ul style="list-style-type: none"><li>• <a href="#">NCBI - 19482174</a></li><li>• <a href="#">UniProtKB - Q13617</a></li><li>• <a href="#">GeneID - 8453</a></li></ul>

## Application Details

<b>Tested Applications:</b>	IHC, IP, WB
<b>Suggested Applications:</b>	Other (Based on references)
<b>Application Note:</b>	Anti-Cul2 has been tested by immunohistochemistry. This antibody reacts with human Cul2 by western blot and immunoprecipitation. The antibody immunoprecipitates in vitro translated product and protein from cell lysates (using HeLa or NIH-3T3). An 86.9 kDa band corresponding to human Cul2 is detected. Most cell lines expressing Cul2 can be used as a positive control. Researchers should determine optimal titers for other applications.
<b>Assay Dilutions:</b>	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
<b>ELISA:</b>	1:2,000 - 1:10,000
<b>IHC:</b>	User Optimized
<b>IP:</b>	1:500
<b>WB:</b>	1:500 - 1:1,000

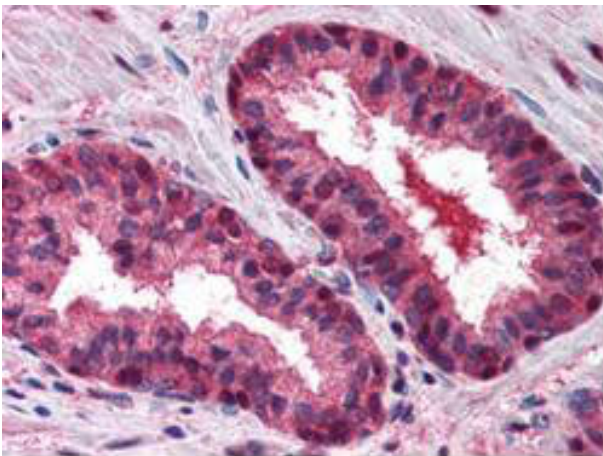
## Formulation

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

## Shipping & Handling

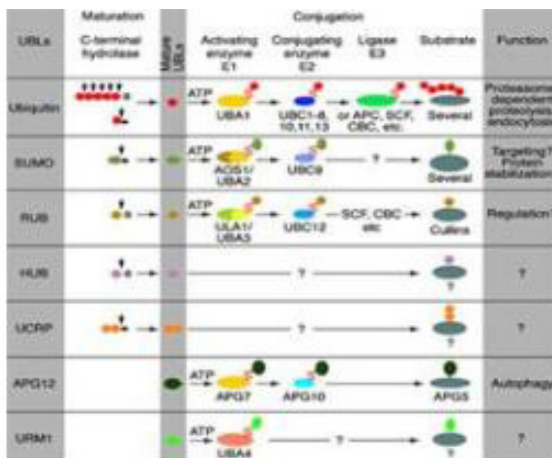
<b>Shipping Condition:</b>	Dry Ice
<b>Storage Condition:</b>	Store Cul2 antibody at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
<b>Expiration:</b>	Expiration date is one (1) year from date of receipt.

## Images



### Immunohistochemistry

Rockland's Anti-CUL2 antibody was diluted 1:500 to detect CUL2 in human prostate tissue. Tissue was formalin fixed and paraffin embedded. No pre-treatment of sample was required. The image shows the localization of antibody as the precipitated red signal, with a hematoxylin purple nuclear counter stain.



### 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, see references below.

## References

- Islam S et al. FBXW8 regulates G1 and S phases of cell cycle progression by restricting  $\beta$ -TrCP1 function. *FEBS J.* (2021)

## 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.