

**Anti-Cul2 (C-terminal specific) (RABBIT) Antibody**  
**Cul2 Antibody**  
**Catalog # ASR3715**

**Specification**

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**Anti-Cul2 (C-terminal specific) (RABBIT) Antibody - Product Information**

Host	Rabbit
Conjugate	Unconjugated
Target Species	Human
Reactivity	Human
Clonality	Polyclonal
Application	WB, IHC, E, IP, I, LCI
Application Note	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.
Physical State	Liquid (sterile filtered)
Immunogen	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.
Preservative	0.01% (w/v) Sodium Azide

**Anti-Cul2 (C-terminal specific) (RABBIT) Antibody - Additional Information**

**Gene ID** 8453

**Other Names**  
8453

**Purity**

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.

**Storage Condition**

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.

## Precautions Note

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

## Anti-Cul2 (C-terminal specific) (RABBIT) Antibody - Protein Information

Name CUL2 ([HGNC:2552](#))

### Function

Core component of multiple cullin-RING-based ECS (ElonginB/C- CUL2/5-SOCS-box protein) E3 ubiquitin-protein ligase complexes, which mediate the ubiquitination of target proteins (PubMed:<a href="http://www.uniprot.org/citations/11384984" target="\_blank">11384984</a>, PubMed:<a href="http://www.uniprot.org/citations/26138980" target="\_blank">26138980</a>, PubMed:<a href="http://www.uniprot.org/citations/29775578" target="\_blank">29775578</a>, PubMed:<a href="http://www.uniprot.org/citations/29779948" target="\_blank">29779948</a>, PubMed:<a href="http://www.uniprot.org/citations/38326650" target="\_blank">38326650</a>). CUL2 serves as a rigid scaffold in the complex and may contribute to catalysis through positioning of the substrate and the E2 ubiquitin- conjugating enzyme (PubMed:<a href="http://www.uniprot.org/citations/10973499" target="\_blank">10973499</a>, PubMed:<a href="http://www.uniprot.org/citations/11384984" target="\_blank">11384984</a>, PubMed:<a href="http://www.uniprot.org/citations/12609982" target="\_blank">12609982</a>, PubMed:<a href="http://www.uniprot.org/citations/24076655" target="\_blank">24076655</a>, PubMed:<a href="http://www.uniprot.org/citations/9122164" target="\_blank">9122164</a>, PubMed:<a href="http://www.uniprot.org/citations/38326650" target="\_blank">38326650</a>). The E3 ubiquitin- protein ligase activity of the complex is dependent on the neddylation of the cullin subunit and is inhibited by the association of the deneddylated cullin subunit with TIP120A/CAND1 (PubMed:<a href="http://www.uniprot.org/citations/12609982" target="\_blank">12609982</a>, PubMed:<a href="http://www.uniprot.org/citations/24076655" target="\_blank">24076655</a>, PubMed:<a href="http://www.uniprot.org/citations/27565346" target="\_blank">27565346</a>, PubMed:<a href="http://www.uniprot.org/citations/38326650" target="\_blank">38326650</a>). The functional specificity of the ECS complex depends on the substrate recognition component (PubMed:<a href="http://www.uniprot.org/citations/10973499" target="\_blank">10973499</a>, PubMed:<a href="http://www.uniprot.org/citations/26138980" target="\_blank">26138980</a>, PubMed:<a href="http://www.uniprot.org/citations/29775578" target="\_blank">29775578</a>, PubMed:<a href="http://www.uniprot.org/citations/29779948" target="\_blank">29779948</a>, PubMed:<a href="http://www.uniprot.org/citations/9122164" target="\_blank">9122164</a>, PubMed:<a href="http://www.uniprot.org/citations/38326650" target="\_blank">38326650</a>). ECS(VHL) mediates the ubiquitination of hypoxia-inducible factor (HIF) (PubMed:<a href="http://www.uniprot.org/citations/10973499" target="\_blank">10973499</a>, PubMed:<a href="http://www.uniprot.org/citations/9122164" target="\_blank">9122164</a>). A number of ECS complexes (containing either KLHDC2, KLHDC3, KLHDC10, APPBP2, FEM1A, FEM1B or FEM1C as substrate-recognition component) are part of the DesCEND (destruction via C-end degrons) pathway, which recognizes a C-degron located at the extreme C terminus of target proteins, leading to their ubiquitination and degradation (PubMed:<a href="http://www.uniprot.org/citations/26138980" target="\_blank">26138980</a>, PubMed:<a href="http://www.uniprot.org/citations/29775578" target="\_blank">29775578</a>, PubMed:<a href="http://www.uniprot.org/citations/29779948" target="\_blank">29779948</a>). ECS complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (PubMed:<a href="http://www.uniprot.org/citations/27565346" target="\_blank">27565346</a>). ECS(LRR1) ubiquitinates MCM7 and promotes CMG replisome disassembly by VCP and chromatin extraction during S- phase (By similarity).

### Cellular Location

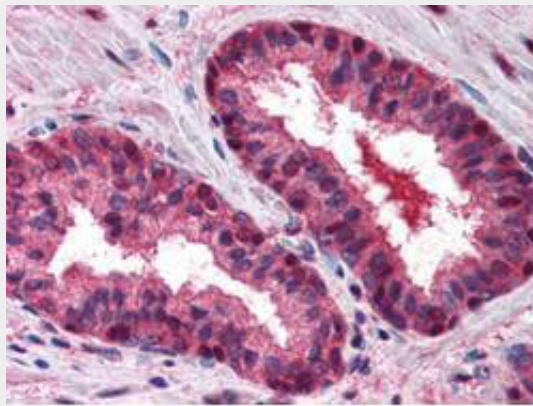
Nucleus {ECO:0000250|UniProtKB:Q9D4H8}.

## Anti-Cul2 (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 Cytometry](#)
- [Cell Culture](#)

## Anti-Cul2 (C-terminal specific) (RABBIT) Antibody - Images



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.

## Anti-Cul2 (C-terminal specific) (RABBIT) Antibody - 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 catalyze 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.