

**Anti-Cul1 (C-terminal specific) (RABBIT) Antibody**  
**Cul1 Antibody**  
**Catalog # ASR3714**

**Specification**

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**Anti-Cul1 (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-Cul1 has been tested by immunohistochemistry. This antibody reacts with human Cul1 by immunohistochemistry, western blot, and immunoprecipitation. The antibody immunoprecipitates in vitro translated product and protein from cell lysates (using HeLa or NIH-3T3). Do not IP in the presence of NP-40, but rather use 0.1% SDS. An 89.6 kDa band corresponding to human Cul1 is detected. Most cell lines expressing Cul1 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 the C-Terminal near amino acids 750-776 of Human Cul1 coupled to KLH.
Preservative	0.01% (w/v) Sodium Azide

**Anti-Cul1 (C-terminal specific) (RABBIT) Antibody - Additional Information**

**Gene ID** 8454

**Other Names**  
8454

**Purity**

This product is monospecific antiserum processed by delipidation and defibrination followed by sterile filtration. This product reacts with human Cullin 1. Cross reactivity is expected against mouse Cul1 based on sequence homology.

**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-Cul1 (C-terminal specific) (RABBIT) Antibody - Protein Information

### Name CUL1

### Function

Core component of multiple cullin-RING-based SCF (SKP1-CUL1- F-box protein) E3 ubiquitin-protein ligase complexes, which mediate the ubiquitination of proteins involved in cell cycle progression, signal transduction and transcription. SCF complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (PubMed: <a href="http://www.uniprot.org/citations/22017875" target="\_blank">22017875</a>, PubMed: <a href="http://www.uniprot.org/citations/22017877" target="\_blank">22017877</a>, PubMed: <a href="http://www.uniprot.org/citations/27565346" target="\_blank">27565346</a>). In the SCF complex, serves as a rigid scaffold that organizes the SKP1-F-box protein and RBX1 subunits. May contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (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 exchange of the substrate recognition component is mediated by TIP120A/CAND1 (PubMed: <a href="http://www.uniprot.org/citations/12609982" target="\_blank">12609982</a>, PubMed: <a href="http://www.uniprot.org/citations/38326650" target="\_blank">38326650</a>). The functional specificity of the SCF complex depends on the F-box protein as substrate recognition component (PubMed: <a href="http://www.uniprot.org/citations/38326650" target="\_blank">38326650</a>). SCF(BTRC) and SCF(FBXW11) direct ubiquitination of CTNNB1 and participate in Wnt signaling. SCF(FBXW11) directs ubiquitination of phosphorylated NFKBIA. SCF(BTRC) directs ubiquitination of NFKBIB, NFKBIE, ATF4, SMAD3, SMAD4, CDC25A, FBXO5 and probably NFKB2. SCF(BTRC) and/or SCF(FBXW11) direct ubiquitination of CEP68 (PubMed: <a href="http://www.uniprot.org/citations/25503564" target="\_blank">25503564</a>, PubMed: <a href="http://www.uniprot.org/citations/25704143" target="\_blank">25704143</a>). SCF(SK2) directs ubiquitination of phosphorylated CDKN1B/p27kip and is involved in regulation of G1/S transition. SCF(SK2) directs ubiquitination of ORC1, CDT1, RBL2, ELF4, CDKN1A, RAG2, FOXO1A, and probably MYC and TAL1. SCF(FBXW7) directs ubiquitination of CCNE1, NOTCH1 released notch intracellular domain (NICD), and probably PSEN1. SCF(FBXW2) directs ubiquitination of GCM1. SCF(FBXO32) directs ubiquitination of MYOD1. SCF(FBXO7) directs ubiquitination of BIRC2 and DLGAP5. SCF(FBXO33) directs ubiquitination of YBX1. SCF(FBXO1) directs ubiquitination of BCL6 and DTL but does not seem to direct ubiquitination of TP53. SCF(BTRC) mediates the ubiquitination of NFKBIA at 'Lys-21' and 'Lys- 22'; the degradation frees the associated NFKB1-RELA dimer to translocate into the nucleus and to activate transcription. SCF(CCNF) directs ubiquitination of CCP110. SCF(FBXL3) and SCF(FBXL21) direct ubiquitination of CRY1 and CRY2. SCF(FBXO9) directs ubiquitination of TTI1 and TELO2. SCF(FBXO10) directs ubiquitination of BCL2. Neddylated CUL1-RBX1 ubiquitinates p53/TP53 recruited by Cul7-RING(FBXW8) complex (PubMed: <a href="http://www.uniprot.org/citations/35982156" target="\_blank">35982156</a>). SCF(BTRC) directs 'Lys-48'-linked ubiquitination of UBR2 in the T-cell receptor signaling pathway (PubMed: <a href="http://www.uniprot.org/citations/38225265" target="\_blank">38225265</a>).

### Tissue Location

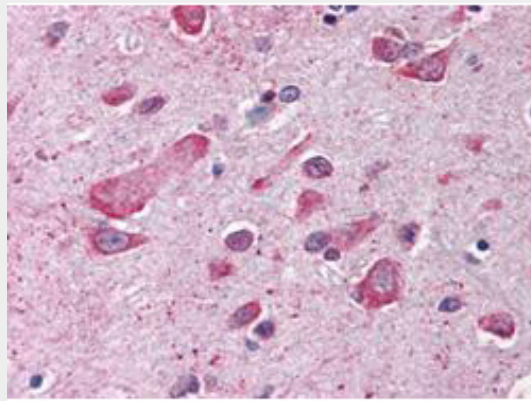
Expressed in lung fibroblasts.

## Anti-Cul1 (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-Cul1 (C-terminal specific) (RABBIT) Antibody - Images**



Rockland's Anti-CUL1 antibody was diluted 1:500 to detect CUL1 in human brain cortex 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-Cul1 (C-terminal specific) (RABBIT) Antibody - Background**

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 1 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, cul1 serves as a rigid scaffold that organizes the SKP1-F-box protein and RBX1 subunits. Cul1 may also contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme. Cul1 is part of the SCF complex consisting of CUL1, RBX1, SKP1 and SKP2, where it interacts directly with SKP1, SKP2 and RBX1. Cul1 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.