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KD-Validated Anti-Cullin 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2394

Specification

KD-Validated Anti-Cullin 1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q13616
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 90 kDa; Observed, 80 kDa KDa**
Gene Name	**CUL1**
Aliases	**CUL1; Cullin 1; Cullin-1; CUL-1**
Immunogen	**A synthesized peptide derived from human Cullin 1**

KD-Validated Anti-Cullin 1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**8454**

Other Names
Cullin-1, CUL-1, CUL1

KD-Validated Anti-Cullin 1 Rabbit Monoclonal 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:22017875, PubMed:22017877, PubMed:27565346). 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:38326650). 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:12609982, PubMed:38326650). The functional specificity of the SCF complex depends on the F-box protein as substrate recognition component (PubMed:38326650). 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, PubMed:25704143). SCF(SKP2) directs ubiquitination of phosphorylated CDKN1B/p27kip and is involved in regulation of G1/S transition. SCF(SKP2) 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:35982156). SCF(BTRC) directs 'Lys-48'-linked ubiquitination of UBR2 in the T-cell receptor signaling pathway (PubMed:38225265). The SCF(FBXO31) protein ligase complex specifically mediates the ubiquitination of proteins amidated at their C-terminus in response to oxidative stress (PubMed:39880951).

Tissue Location
Expressed in lung fibroblasts.

KD-Validated Anti-Cullin 1 Rabbit Monoclonal 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

KD-Validated Anti-Cullin 1 Rabbit Monoclonal Antibody - Images

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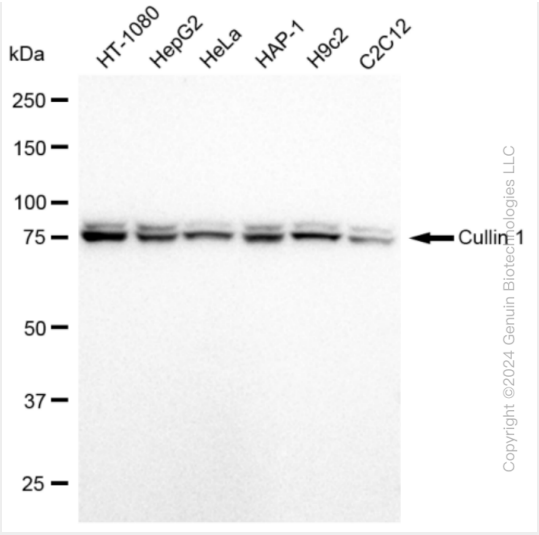
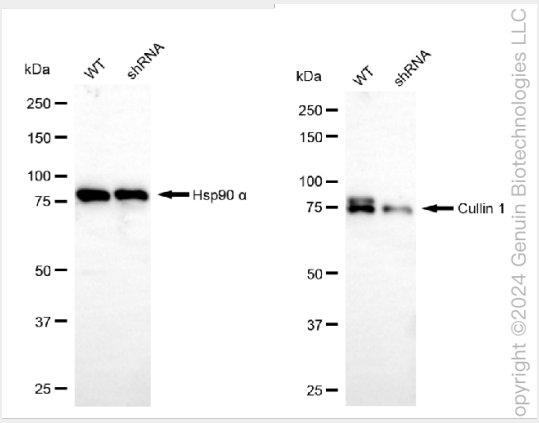
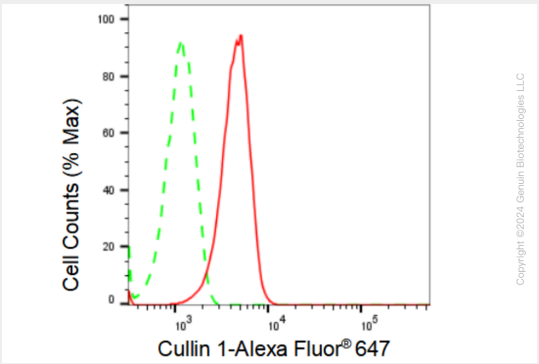


Western blotting analysis using anti-Cullin 1 antibody (Cat#AGI2394). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Cullin 1 antibody (Cat#AGI2394, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Cullin 1 antibody (Cat#AGI2394). Cullin 1 expression in wild type (WT) and Cullin 1 shRNA knockdown (KD) 293T cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-Cullin 1 antibody (Cat#AGI2394, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Cullin 1 expression in HepG2 cells using Cullin 1 antibody (Cat#AGI2394, 1:2,000). Green, isotype control; red, Cullin 1.

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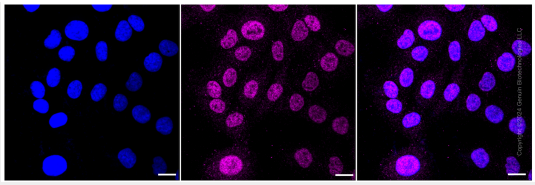

Immunocytochemical staining of HT-1080 cells with Cullin 1 antibody (Cat#AGI2394, 1:1,000). Nuclei were stained blue with DAPI; Cullin 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.