

Rabbit CUL1 Polyclonal Antibody | anti-CUL1 antibody

CUL1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326618	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

CUL1; Polyclonal Antibody; CUL1 Antibody; CUL 1; CUL-1; CUL1_HUMAN; Cullin-1; Cullin1; MGC149834; MGC149835; anti-CUL1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	CUL1 antibody detects endogenous levels of total CUL1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	776
Applicable Applications for anti-CUL1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human CUL1
Tissue Specificity	Expressed in lung fibroblasts.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)

Western blot analysis of HeLa whole cell lysates, using CUL1 Antibody. The lane on the left is treated with the antigen-specific peptide.



IF (Immunofluorescence)

AAA326618 staining HeLa cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.



IHC (Immunohistochemistry)

AAA326618 at 1/100 staining Human kidney tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-CUL1 antibody

Description: Ubiquitin can be covalently linked to many cellular proteins by the ubiquitination process, which targets proteins for degradation by the 26S proteasome. Three components are involved in the target protein-ubiquitin conjugation process. Ubiquitin is first activated by forming a thiolester complex with the activation component E1; the activated ubiquitin is subsequently transferred to the ubiquitin-carrier protein E2, then from E2 to ubiquitin ligase E3 for final delivery to the epsilon-NH2 of the target protein lysine residue (1-3). Combinatorial interactions of different E2 and E3 proteins result in substrate specificity (4). Recent data suggest that activated E2 associates transiently with E3, and that the dissociation is a critical step for ubiquitination (5). Cullin homolog 1 (CUL1), the mammalian homolog of Cdc53 from yeast, is a molecular scaffold of the SCF (Skp1/CUL1/F-box) E3 ubiquitin ligase protein complex. Thus, CUL1 and its family members function in ubiquitin dependent proteolysis (6). In particular, CUL1 has been shown to mediate ubiquitin dependent degradation of p21 Waf1/Cip1, cyclin D and IkappaB-alpha (7, 8).

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: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. 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. The functional specificity of the SCF complex depends on the F-box protein as substrate recognition component. 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:25704143, PubMed:25503564). 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 cyclin E, 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 TEO2. SCF(FBXO10) directs ubiquitination of BCL2.

Post-translational Modifications: Neddylated; which enhances the ubiquitination activity of SCF and prevents binding of the inhibitor CAND1. Deneddylated via its interaction with the COP9 signalosome (CSN) complex (PubMed:10597293, PubMed:10713156, PubMed:15537541, PubMed:18805092). (Microbial infection) Deneddylated by Epstein-Barr virus BPLF1 leading to a S-phase-like environment that is required for efficient replication of the viral genome (PubMed:20190741).

Similarity: Belongs to the cullin family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	32307161
NCBI GeneID	8454
NCBI Accession #	NP_003583.2
NCBI GenBank Nucleotide #	NM_003592.2
UniProt Accession #	Q13616; O60719; Q08AL6; Q8IYW1; D3DWG3

Molecular Weight	Observed: 90 kDa Predicted: 90 kDa
NCBI Official Full Name	cullin-1
NCBI Official Synonym Full Names	cullin 1
NCBI Official Symbol	CUL1
NCBI Protein Information	cullin-1
UniProt Protein Name	Cullin-1
UniProt Gene Name	CUL1
UniProt Synonym Gene Names	CUL-1

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