

Rabbit CUL3 Polyclonal Antibody | anti-CUL3 antibody

CUL3 Antibody

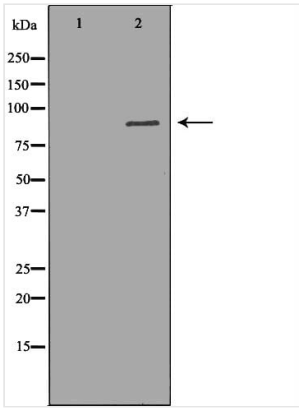
CATALOG # AAA326004	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

CUL3; Polyclonal Antibody; CUL3 Antibody; CUL 3; Cul-3; cul3; CUL3_HUMAN; Cullin-3; Cullin3; KIAA0617; PHA2E; anti-CUL3 antibody

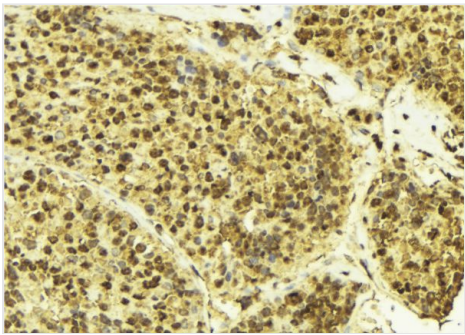
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	CUL3 antibody detects endogenous levels of total CUL3
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	702
Applicable Applications for anti-CUL3 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human CUL3
Subcellular Location	Nucleus. Golgi Apparatus.
Tissue Specificity	Brain, spermatozoa, and testis (at protein level). Widely expressed.
Predicted Cross Reactivity	Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



WB (Western Blot)

Western blot analysis of Jurkat lysate using CUL3 antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326004 at 1/100 staining Human breast cancer 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.

Related Product Information for anti-CUL3 antibody

Description: CUL3 (Cullin-3) is a member of the cullin-based ubiquitin ligase family. By interacting with Hrt1 and BTB domain containing proteins, the complex functions as a CUL3-based E3 ligase to bring specific substrates to ubiquitylation and degradation (1). The CUL3 complex has been shown to target many substrates involved in cell cycle progression (2), transcription (3), development and differentiation (4, 5).

Function: Core component of multiple cullin-RING-based BCR (BTB-CUL3-RBX1) E3 ubiquitin-protein ligase complexes which mediate the ubiquitination and subsequent proteasomal degradation of target proteins. BCR complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (PubMed:27565346). As a scaffold protein 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 is inhibited by the association of the deneddylated cullin subunit with TIP120A/CAND1. The functional specificity of the BCR complex depends on the BTB domain-containing protein as the substrate recognition component. BCR(KLHL42) is involved in ubiquitination of KATNA1. BCR(SPOP) is involved in ubiquitination of BMI1/PCGF4, BRMS1, H2AFY and DAXX, GLI2 and GLI3. Can also form a cullin-RING-based BCR (BTB-CUL3-RBX1) E3 ubiquitin-protein ligase complex containing homodimeric SPOPL or the heterodimer formed by SPOP and SPOPL; these complexes have lower ubiquitin ligase activity. BCR(KLHL9-KLHL13) controls the dynamic behavior of AURKB on mitotic chromosomes and thereby coordinates faithful mitotic progression and completion of cytokinesis. BCR(KLHL12) is involved in ER-Golgi transport by regulating the size of COPII coats, thereby playing a key role in collagen export, which is required for embryonic stem (ES) cells division: BCR(KLHL12) acts by mediating monoubiquitination of SEC31 (SEC31A or SEC31B) (PubMed:22358839, PubMed:27716508). BCR(KLHL3) acts as a regulator of ion transport in the distal nephron; by mediating ubiquitination of WNK4 (PubMed:23387299, PubMed:23453970, PubMed:23576762). The BCR(KLHL20) E3 ubiquitin ligase complex is involved in interferon response and anterograde Golgi to endosome transport: it mediates both ubiquitination leading to degradation and 'Lys-33'-linked ubiquitination (PubMed:20389280, PubMed:21840486, PubMed:21670212, PubMed:24768539). The BCR(KLHL21) E3 ubiquitin ligase complex regulates localization of the chromosomal passenger complex (CPC) from chromosomes to the spindle midzone in anaphase and mediates the ubiquitination of AURKB (PubMed:19995937). The BCR(KLHL22) ubiquitin ligase complex mediates monoubiquitination of PLK1, leading to PLK1 dissociation from phosphoreceptor proteins and subsequent removal from kinetochores, allowing silencing of the spindle assembly checkpoint (SAC) and chromosome segregation (PubMed:23455478). The BCR(KLHL25) ubiquitin ligase complex is involved in translational homeostasis by mediating ubiquitination and subsequent degradation of hypophosphorylated EIF4EBP1 (4E-BP1) (PubMed:22578813). The BCR(KBTBD8) complex acts by mediating monoubiquitination of NOLC1 and TCOF1, leading to remodel the translational program of differentiating cells in favor of neural crest specification (PubMed:26399832). Involved in ubiquitination of cyclin E and of cyclin D1 (in vitro) thus involved in regulation of G1/S transition. Involved in the ubiquitination of KEAP1, ENC1 and KLHL41. In concert with ATF2 and RBX1, promotes degradation of KAT5 thereby attenuating its ability to acetylate and activate ATM. The BCR(KCTD17) E3 ubiquitin ligase complex mediates ubiquitination and degradation of TCHP, a down-regulator of cilium assembly, thereby inducing ciliogenesis (PubMed:25270598). The BCR(KLHL24) E3 ubiquitin ligase complex mediates ubiquitination of KRT14, controls KRT14 levels during keratinocytes differentiation, and is essential for skin integrity (PubMed:27798626).

Subunit Structure: Forms neddylation-dependent homodimers. Component of multiple BCR (BTB-CUL3-RBX1) E3 ubiquitin-protein ligase complexes formed of CUL3, RBX1 and a variable BTB domain-containing protein acting as both, adapter to cullin and substrate recognition subunit. The BCR complex may be active as a heterodimeric complex, in which NEDD8, covalently attached to one CUL3 molecule, binds to the C-terminus of a second CUL3 molecule. Interacts with RBX1, RNF7, CYCE and TIP120A/CAND1. Part of the BCR(SPOP) containing SPOP, and of BCR containing homodimeric SPOPL or the heterodimer formed by SPOP and SPOPL. Part of the probable BCR(KLHL9-KLHL13) complex with BTB domain proteins KLHL9 and KLHL13. Part of the BCR(KLHL41) complex containing KLHL41. Component of the BCR(KLHL12) E3 ubiquitin ligase complex, at least composed of CUL3 and KLHL12 and RBX1. Component of the BCR(KLHL3) E3 ubiquitin ligase complex, at least composed of CUL3 and KLHL3 and RBX1 (Probable). Part of the BCR(ENC1) complex containing ENC1. Part of a complex consisting of BMI1/PCGF4, CUL3 and SPOP. Part of a complex consisting of BRMS1, CUL3 and SPOP. Component of the BCR(KLHL21) E3 ubiquitin ligase complex, at least composed of CUL3, KLHL21 and RBX1. Component of the BCR(KLHL22) E3 ubiquitin ligase complex, at least composed of CUL3, KLHL22 and RBX1. Component of the BCR(KLHL25) E3 ubiquitin ligase complex, at least composed of CUL3, KLHL25 and RBX1. Part of a complex consisting of H2AFY, CUL3 and SPOP. Component of the BCR(KLHL42) E3 ubiquitin ligase complex, at least composed of CUL3 and KLHL42. Interacts with KLHL42 (via the BTB domain). Interacts with KATNA1; the interaction is enhanced by KLHL42. Component of the BCR(KBTBD8) E3 ubiquitin ligase complex, at least composed of CUL3, KBTBD8 and RBX1 (PubMed:26399832). Interacts with KCTD5, KLHL9, KLHL11, KLHL13, GAN, ZBTB16, KLHL3, KLHL15, KLHL20, KLHL36, GMCL2, BTBD1. Part of a complex that contains CUL3, RBX1 and GAN. Interacts (via BTB domain) with KLHL17; the interaction regulates surface GRIK2 expression. Interacts with KCTD7. Part of the BCR(GAN) complex containing GAN. Part of the BCR(KEAP1) complex containing KEAP1. Interacts with KLHL10 (By similarity). Interacts with KAT5 and ATF2. Interacts with DCUN1D3. Interacts with KCTD17 in the BCR(KCTD17) E3 ubiquitin ligase complex, at least composed of CUL3, KCTD17 and RBX1 (PubMed:25270598). Interacts (when neddylated) with ARIH1; leading to activate the E3 ligase activity of ARIH1 (PubMed:24076655, PubMed:27565346). Interacts with COPS9 isoform 2 (PubMed:23776465). Interacts with PPP2R5B; this interaction is indirect and mediated through KLHL15-binding and leads to PPP2R5B proteasomal degradation (PubMed:23135275). Interacts with RBBP8/CtIP; this interaction is indirect and mediated through KLHL15-binding and leads to RBBP8 proteasomal degradation (PubMed:27561354). Interacts with KLHL24 in the BCR(KLHL24) E3 ubiquitin ligase complex, composed of CUL3, RBX1 and KLHL24 (PubMed:27798626).

Post-translational Modifications: Neddylated. Attachment of NEDD8 is required for the E3 ubiquitin-protein ligase

NCBI AND UNIPROT INFORMATION

NCBI GI #	380714663
NCBI GeneID	8452
NCBI Accession #	NP_001244126.1
NCBI GenBank Nucleotide #	NM_001257197.1
UniProt Accession #	Q13618; O75415; Q569L3; Q9UBI8; Q9UET7; A8K536; B8ZZC3
Molecular Weight	Observed: 89 kDa Predicted: 89 kDa
NCBI Official Full Name	cullin-3 isoform 2
NCBI Official Synonym Full Names	cullin 3
NCBI Official Symbol	CUL3
NCBI Official Synonym Symbols	CUL-3; PHA2E
NCBI Protein Information	cullin-3
UniProt Protein Name	Cullin-3
UniProt Gene Name	CUL3
UniProt Synonym Gene Names	KIAA0617; CUL-3

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/cul3-antibody-immunohistochemistry-western-blot-elisa/326004>