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Anti-Cul5 (N-terminal specific) (RABBIT) Antibody

Cul5 Antibody
Catalog # ASR3718

Specification

Anti-Cul5 (N-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-Cul5 has been tested by immunohistochemistry. This antibody reacts with human Cul5 by western blot and immunoprecipitation. The antibody immunoprecipitates protein from cell lysates (using 293T, U2OS and others). This antibody also co-immunoprecipitates associated proteins. A 90.9 kDa band corresponding to human Cul5 is detected. Most cell lines expressing Cul4A 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 an N-Terminal region near amino acids 1-25 of Human Cul5 (N-terminus) coupled to KLH.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Cul5 (N-terminal specific) (RABBIT) Antibody - Additional Information

Gene ID 8065

Other Names
8065

Purity
This product is monospecific antiserum processed by delipidation and defibrination followed by sterile filtration. This product reacts with human Cullin 5. Cross reactivity is expected against mouse Cul5 based on a high degree of sequence homology. Cross reactivity with other human cullins may occur.

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-Cul5 (N-terminal specific) (RABBIT) Antibody - Protein Information

Name CUL5 {ECO:0000303|PubMed:10230407, ECO:0000312|HGNC:HGNC:2556}

Function
Core component of multiple cullin-5-RING E3 ubiquitin-protein ligase complexes (ECS complexes, also named CRL5 complexes), which mediate the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:11384984, PubMed:15601820, PubMed:21199876, PubMed:21980433, PubMed:23897481, PubMed:25505247, PubMed:27910872, PubMed:32200094, PubMed:33268465, PubMed:35512830, PubMed:38418882). Acts a scaffold protein that contributes to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (PubMed:11384984, PubMed:15601820, PubMed:33268465). The functional specificity of the E3 ubiquitin-protein ligase complex depends on the variable SOCS box-containing substrate recognition component (PubMed:11384984, PubMed:15601820, PubMed:33268465). Acts as a key regulator of neuron positioning during cortex development: component of various SOCS-containing ECS complexes, such as the ECS(SOCS7) complex, that regulate reelin signaling by mediating ubiquitination and degradation of DAB1 (By similarity). ECS(SOCS1) seems to direct ubiquitination of JAK2 (PubMed:11384984). The ECS(SOCS2) complex mediates the ubiquitination and subsequent proteasomal degradation of phosphorylated EPOR and GHR (PubMed:21980433, PubMed:25505247). The ECS(SPSB3) complex catalyzes ubiquitination of nuclear CGAS (PubMed:38418882). ECS(KLHDC1) complex is part of the DesCEND (destruction via C-end degrons) pathway and mediates ubiquitination and degradation of truncated SELENOS selenoprotein produced by failed UGA/Sec decoding, which ends with a glycine (PubMed:32200094). The ECS(ASB9) complex mediates ubiquitination and degradation of CKB (PubMed:33268465). As part of some ECS complex, promotes 'Lys-11'- linked ubiquitination and degradation of BTRC (PubMed:27910872). As part of a multisubunit ECS complex, polyubiquitinates monoubiquitinated POLR2A (PubMed:19920177). As part of the ECS(RAB40C) complex, mediates ANKRD28 ubiquitination and degradation, thereby inhibiting

protein phosphatase 6 (PP6) complex activity and focal adhesion assembly during cell migration (PubMed:35512830). As part of the ECS(RAB40A) complex, mediates RHOU 'Lys-48'-linked ubiquitination and degradation, thus inhibiting focal adhesion disassembly during cell migration (PubMed:26598620). As part of the ECS(RAB40B) complex, mediates LIMA1/EPLIN and RAP2 ubiquitination, thereby regulating actin cytoskeleton dynamics and stress fiber formation during cell migration (PubMed:33999101, PubMed:35293963). May form a cell surface vasopressin receptor (PubMed:9037604).

Cellular Location
Nucleus. Note=Localizes to sites of DNA damage in a UBAP2 and UBAP2L-dependent manner.

Anti-Cul5 (N-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 Cytomety
- Cell Culture

Anti-Cul5 (N-terminal specific) (RABBIT) Antibody - Images

Rockland's Anti-CUL5 antibody was diluted 1:500 to detect CUL5 in human kidney 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-Cul5 (N-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 5 is a component of E3 ubiquitin ligase complexes, which mediate the ubiquitination and subsequent proteasomal degradation of target proteins. Cullin 5 seems to be

involved proteosomal degradation of p53/TP53 stimulated by adenovirus E1B-55 kDa protein. Cullin 5 may form a cell surface vasopressin receptor. Cullin 5 is part of a E3 ubiquitin ligase complex with elongin BC complex (TCEB1 and TCEB2), RBX1 and MUF1, complexes with elongin BC complex (TCEB1 and TCEB2), RXB1 and TCEB3 or SOCS1 or WSB1; elongin BC complex (TCEB1 and TCEB2), RBX1 and VHL; elongin BC complex (TCEB1 and TCEB2), RBX1, adenovirus type 5 E1B-55kDa protein and adenovirus type 5 E4-orf6. Cullin 5 Interacts with RBX1 and RNF7.