

Cullin 4A/4B Rabbit mAb

Catalog # AP75306

Product Information

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|--------------------------|------------------------|
| Application | WB, IHC-P |
| Primary Accession | Q13620 |
| Reactivity | Human, Rat, Hamster |
| Host | Rabbit |
| Clonality | Monoclonal Antibody |
| Calculated MW | 103982 |

Additional Information

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| Gene ID | 8450 |
| Other Names | CUL4B |
| Dilution | WB~1/500-1/1000 IHC-P~N/A |
| Format | 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA. |
| Storage | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |

Protein Information

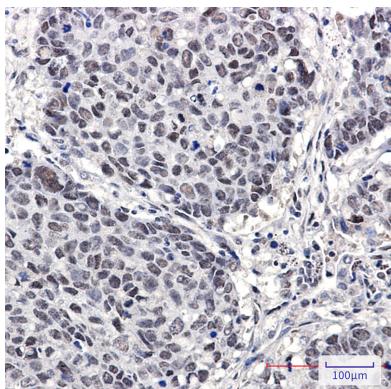
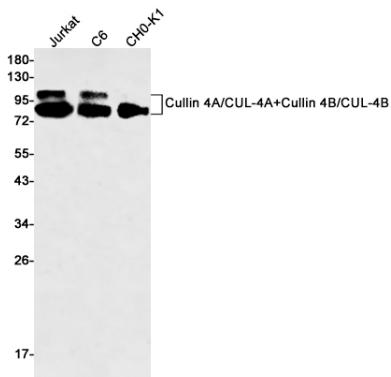
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|-----------------|--|
| Name | CUL4B {ECO:0000303 PubMed:14578910, ECO:0000312 HGNC:HGNC:2555} |
| Function | Core component of multiple cullin-RING-based E3 ubiquitin- protein ligase complexes which mediate the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed: 14578910 , PubMed: 16322693 , PubMed: 16678110 , PubMed: 18593899 , PubMed: 22118460 , PubMed: 29779948 , PubMed: 30166453 , PubMed: 33854232 , PubMed: 33854239 , PubMed: 25970626). The functional specificity of the E3 ubiquitin- protein ligase complex depends on the variable substrate recognition subunit (PubMed: 14578910 , PubMed: 16678110 , PubMed: 18593899 , PubMed: 22118460 , PubMed: 29779948). CUL4B may act within the complex as a scaffold protein, contributing to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (PubMed: 14578910 , PubMed: 16678110 , PubMed: 18593899 , PubMed: 22118460). Plays a role as part of the E3 ubiquitin-protein ligase complex in polyubiquitination of CDT1, histone H2A, histone H3 and histone H4 in response to radiation-induced DNA damage (PubMed: 14578910 , PubMed: 16678110 , PubMed: 18593899). Targeted to UV damaged chromatin by DDB2 and may be important for DNA repair and DNA replication (PubMed: 16678110). A number of DCX complexes (containing either TRPC4AP |

or DCAF12 as substrate-recognition component) are part of the DesCEND (destruction via C-end degrons) pathway, which recognizes a C-degron located at the extreme C terminus of target proteins, leading to their ubiquitination and degradation (PubMed:[29779948](#)). The DCX(AMBRA1) complex is a master regulator of the transition from G1 to S cell phase by mediating ubiquitination of phosphorylated cyclin-D (CCND1, CCND2 and CCND3) (PubMed:[33854232](#), PubMed:[33854239](#)). The DCX(AMBRA1) complex also acts as a regulator of Cul5-RING (CRL5) E3 ubiquitin-protein ligase complexes by mediating ubiquitination and degradation of Elongin-C (ELOC) component of CRL5 complexes (PubMed:[30166453](#)). Required for ubiquitination of cyclin E (CCNE1 or CCNE2), and consequently, normal G1 cell cycle progression (PubMed:[16322693](#), PubMed:[19801544](#)). Regulates the mammalian target-of-rapamycin (mTOR) pathway involved in control of cell growth, size and metabolism (PubMed:[18235224](#)). Specific CUL4B regulation of the mTORC1-mediated pathway is dependent upon 26S proteasome function and requires interaction between CUL4B and MLST8 (PubMed:[18235224](#)). With CUL4A, contributes to ribosome biogenesis (PubMed:[26711351](#)).

Cellular Location

Cytoplasm {ECO:0000250 | UniProtKB:A2A432}. Nucleus. Note=More concentrated in nuclei than in cytoplasm in germinal vesicle (GV) stage oocytes, zygotes and the 2-cell stage, but distributed in the cytoplasm at the MII-stage oocytes. {ECO:0000250 | UniProtKB:A2A432}

Images



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