

# Cullin 4A/4B Rabbit mAb

Catalog # AP75306

## Product Information

Application	WB, IHC-P
Primary Accession	<a href="#">Q13620</a>
Reactivity	Human, Rat, Hamster
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	103982

## Additional Information

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

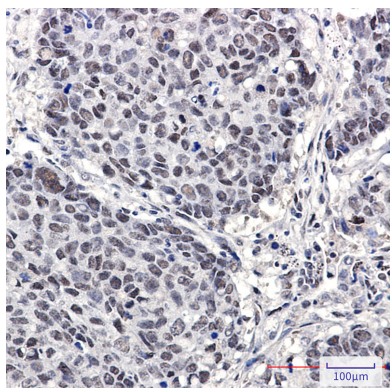
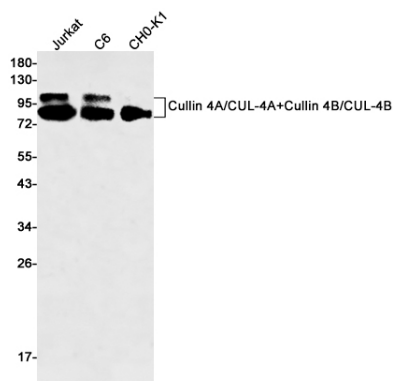
Name	CUL4B {ECO:0000303   PubMed:14578910, ECO:0000312   HGNC:HGNC:2555}
Function	<p>Core component of multiple cullin-RING-based E3 ubiquitin- protein ligase complexes which mediate the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:<a href="#">14578910</a>, PubMed:<a href="#">16322693</a>, PubMed:<a href="#">16678110</a>, PubMed:<a href="#">18593899</a>, PubMed:<a href="#">22118460</a>, PubMed:<a href="#">29779948</a>, PubMed:<a href="#">30166453</a>, PubMed:<a href="#">33854232</a>, PubMed:<a href="#">33854239</a>, PubMed:<a href="#">25970626</a>). The functional specificity of the E3 ubiquitin- protein ligase complex depends on the variable substrate recognition subunit (PubMed:<a href="#">14578910</a>, PubMed:<a href="#">16678110</a>, PubMed:<a href="#">18593899</a>, PubMed:<a href="#">22118460</a>, PubMed:<a href="#">29779948</a>). CUL4B may act within the complex as a scaffold protein, contributing to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (PubMed:<a href="#">14578910</a>, PubMed:<a href="#">16678110</a>, PubMed:<a href="#">18593899</a>, PubMed:<a href="#">22118460</a>). 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:<a href="#">14578910</a>, PubMed:<a href="#">16678110</a>, PubMed:<a href="#">18593899</a>). Targeted to UV damaged chromatin by DDB2 and may be important for DNA repair and DNA replication (PubMed:<a href="#">16678110</a>). A number of DCX complexes (containing either TRPC4AP</p>

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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