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CUL4B Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20232c

Product Information

Application	WB, E
Primary Accession	Q13620
Other Accession	A2A432, NP_003579.3
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	103982
Antigen Region	250-278

Additional Information

Gene ID	8450
Other Names	Cullin-4B, CUL-4B, CUL4B, KIAA0695
Target/Specificity	This CUL4B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 250-278 amino acids from the Central region of human CUL4B.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CUL4B Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

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). 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}

Background

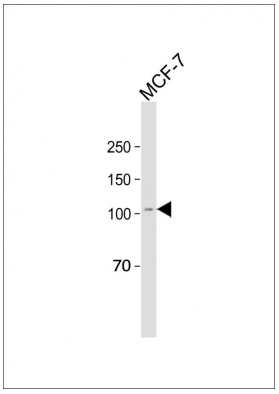
This gene is a member of the cullin family. The encoded protein forms a complex that functions as an E3 ubiquitin ligase and catalyzes the polyubiquitination of specific protein substrates in the cell. The protein interacts with a ring finger protein, and is required for the proteolysis of several regulators of DNA replication including chromatin licensing and DNA replication factor 1 and cyclin E. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq].

References

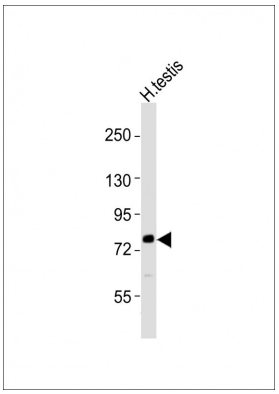
Aggarwal, P., et al. Cancer Cell 18(4):329-340(2010)
Abbas, T., et al. Mol. Cell 40(1):9-21(2010)
Kerzendorfer, C., et al. Hum. Mol. Genet. 19(7):1324-1334(2010)
Gascoin-Lachambre, G., et al. Placenta 31(2):151-157(2010)
Badura-Stronka, M., et al. Clin. Genet. 77(2):141-144(2010)

Images

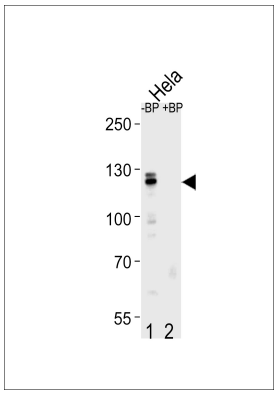
All lanes: Anti-CUL4B Antibody (Center) at 1:250 dilution +



MCF-7 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 103 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Anti-CUL4B Antibody (Center)at 1:2000 dilution + human testis lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 104 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of CUL4B Antibody (Center) Pab (Cat. #AP20232c) pre-incubated without(lane 1) and with(lane 2) blocking peptide in Hela cell line lysate. CUL4B Antibody (Center) (arrow) was detected using the purified Pab.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.