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CUL4B Blocking Peptide (Center)
Synthetic peptide
Catalog # BP20232c

Specification

CUL4B Blocking Peptide (Center) - Product Information

Primary Accession	Q13620
Other Accession	A2A432, NP_003579.3

CUL4B Blocking Peptide (Center) - Additional Information

Gene ID 8450

Other Names
Cullin-4B, CUL-4B, CUL4B, KIAA0695

Target/Specificity
The synthetic peptide sequence is selected from aa 265-278 of HUMAN CUL4B

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CUL4B Blocking Peptide (Center) - 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:29779948, PubMed:30166453, PubMed:33854232, PubMed:33854239, PubMed:22118460). The functional specificity of the E3 ubiquitin-protein ligase complex depends on the variable substrate recognition subunit (PubMed:14578910, PubMed:<a href="http://www.uniprot.org/citations/16678110"

target="_blank">16678110, PubMed:18593899, PubMed:29779948, PubMed:22118460). 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}

CUL4B Blocking Peptide (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

CUL4B Blocking Peptide (Center) - Images

CUL4B Blocking Peptide (Center) - 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].

CUL4B Blocking Peptide (Center) - 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)