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CUL4A Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP13873a

Specification

CUL4A Antibody (N-term) Blocking peptide - Product Information

Primary Accession Q13619

CUL4A Antibody (N-term) Blocking peptide - Additional Information

Gene ID 8451

Other Names
Cullin-4A, CUL-4A, CUL4A

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP13873a was selected from the N-term region of CUL4A. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

CUL4A Antibody (N-term) Blocking peptide - Protein Information

Name CUL4A {ECO:0000303|PubMed:9721878, ECO:0000312|HGNC:HGNC:2554}

Function
Core component of multiple cullin-RING-based E3 ubiquitin- protein ligase complexes which mediate the ubiquitination of target proteins (PubMed:14578910, PubMed:15811626, PubMed:15548678, PubMed:15448697, PubMed:14739464, PubMed:16678110, PubMed:17041588, PubMed:24209620, PubMed:30166453, PubMed:33854232, PubMed:33854239). As a scaffold

protein may contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (PubMed:14578910, PubMed:15811626, PubMed:15548678, PubMed:15448697, PubMed:14739464, PubMed:16678110, PubMed:17041588, PubMed:24209620). The E3 ubiquitin- protein ligase activity of the complex is dependent on the neddylation of the cullin subunit and is inhibited by the association of the deneddylated cullin subunit with TIP120A/CAND1 (PubMed:14578910, PubMed:15811626, PubMed:15548678, PubMed:15448697, PubMed:14739464, PubMed:16678110, PubMed:17041588, PubMed:24209620). The functional specificity of the E3 ubiquitin-protein ligase complex depends on the variable substrate recognition component (PubMed:14578910, PubMed:15811626, PubMed:15548678, PubMed:15448697, PubMed:14739464, PubMed:16678110, PubMed:17041588, PubMed:24209620). DCX(DET1-COP1) directs ubiquitination of JUN (PubMed:14739464). DCX(DDB2) directs ubiquitination of XPC (PubMed:15811626). DCX(DDB2) ubiquitinates histones H3-H4 and is required for efficient histone deposition during replication-coupled (H3.1) and replication-independent (H3.3) nucleosome assembly, probably by facilitating the transfer of H3 from ASF1A/ASF1B to other chaperones involved in histone deposition (PubMed:16678110, PubMed:17041588, PubMed:24209620). DCX(DTL) plays a role in PCNA-dependent polyubiquitination of CDT1 and MDM2-dependent ubiquitination of p53/TP53 in response to radiation-induced DNA damage and during DNA replication (PubMed:14578910, PubMed:15548678, PubMed:15448697). DCX(DTL) directs autoubiquitination of DTL (PubMed:23478445). In association with DDB1 and SKP2 probably is involved in ubiquitination of CDKN1B/p27kip (PubMed:16537899). Is involved in ubiquitination of HOXA9 (PubMed:14609952). The DDB1-CUL4A- DTL E3 ligase complex regulates the circadian clock function by mediating the ubiquitination and degradation of CRY1 (PubMed:26431207). 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). With CUL4B, contributes to ribosome biogenesis (PubMed:26711351).

CUL4A Antibody (N-term) Blocking peptide - Protocols

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

- Blocking Peptides

CUL4A Antibody (N-term) Blocking peptide - Images

CUL4A Antibody (N-term) Blocking peptide - Background

CUL4A is the ubiquitin ligase component of a multimericcomplex involved in the degradation of DNA damage-response proteins(Liu et al., 2009 [PubMed 19481525]).

CUL4A Antibody (N-term) Blocking peptide - References

Aggarwal, P., et al. Cancer Cell 18(4):329-340(2010)Abbas, T., et al. Mol. Cell 40(1):9-21(2010)Lv, X.B., et al. J. Biol. Chem. 285(24):18234-18240(2010)Kerzendorfer, C., et al. Hum. Mol. Genet. 19(7):1324-1334(2010)Melchor, L., et al. Breast Cancer Res. 11 (6), R86 (2009) :