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# Cullin 4A (CUL4A) Antibody (C-term) Blocking peptide

**Synthetic peptide**
**Catalog # BP7590b**

## Specification

### Cullin 4A (CUL4A) Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q13619

### Cullin 4A (CUL4A) Antibody (C-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 <a href=/products/AP7590b>AP7590b</a> was selected from the Human region of human CUL4a (Human C-term). 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.

### Cullin 4A (CUL4A) Antibody (C-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:<a href="http://www.uniprot.org/citations/14578910" target="_blank">14578910</a>, PubMed:<a href="http://www.uniprot.org/citations/15811626" target="_blank">15811626</a>, PubMed:<a href="http://www.uniprot.org/citations/15548678" target="_blank">15548678</a>, PubMed:<a href="http://www.uniprot.org/citations/15448697" target="_blank">15448697</a>, PubMed:<a href="http://www.uniprot.org/citations/14739464" target="_blank">14739464</a>, PubMed:<a href="http://www.uniprot.org/citations/16678110" target="_blank">16678110</a>, PubMed:<a href="http://www.uniprot.org/citations/17041588" target="_blank">17041588</a>, PubMed:<a href="http://www.uniprot.org/citations/24209620" target="_blank">24209620</a>, PubMed:<a href="http://www.uniprot.org/citations/30166453" target="_blank">30166453</a>, PubMed:<a href="http://www.uniprot.org/citations/33854232" target="_blank">33854232</a>, PubMed:<a

href="http://www.uniprot.org/citations/33854239" target="_blank">33854239</a>). As a scaffold protein may contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (PubMed:<a href="http://www.uniprot.org/citations/14578910" target="_blank">14578910</a>, PubMed:<a href="http://www.uniprot.org/citations/15811626" target="_blank">15811626</a>, PubMed:<a href="http://www.uniprot.org/citations/15548678" target="_blank">15548678</a>, PubMed:<a href="http://www.uniprot.org/citations/15448697" target="_blank">15448697</a>, PubMed:<a href="http://www.uniprot.org/citations/14739464" target="_blank">14739464</a>, PubMed:<a href="http://www.uniprot.org/citations/16678110" target="_blank">16678110</a>, PubMed:<a href="http://www.uniprot.org/citations/17041588" target="_blank">17041588</a>, PubMed:<a href="http://www.uniprot.org/citations/24209620" target="_blank">24209620</a>). 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:<a href="http://www.uniprot.org/citations/14578910" target="_blank">14578910</a>, PubMed:<a href="http://www.uniprot.org/citations/15811626" target="_blank">15811626</a>, PubMed:<a href="http://www.uniprot.org/citations/15548678" target="_blank">15548678</a>, PubMed:<a href="http://www.uniprot.org/citations/15448697" target="_blank">15448697</a>, PubMed:<a href="http://www.uniprot.org/citations/14739464" target="_blank">14739464</a>, PubMed:<a href="http://www.uniprot.org/citations/16678110" target="_blank">16678110</a>, PubMed:<a href="http://www.uniprot.org/citations/17041588" target="_blank">17041588</a>, PubMed:<a href="http://www.uniprot.org/citations/24209620" target="_blank">24209620</a>). The functional specificity of the E3 ubiquitin-protein ligase complex depends on the variable substrate recognition component (PubMed:<a href="http://www.uniprot.org/citations/14578910" target="_blank">14578910</a>, PubMed:<a href="http://www.uniprot.org/citations/15811626" target="_blank">15811626</a>, PubMed:<a href="http://www.uniprot.org/citations/15548678" target="_blank">15548678</a>, PubMed:<a href="http://www.uniprot.org/citations/15448697" target="_blank">15448697</a>, PubMed:<a href="http://www.uniprot.org/citations/14739464" target="_blank">14739464</a>, PubMed:<a href="http://www.uniprot.org/citations/16678110" target="_blank">16678110</a>, PubMed:<a href="http://www.uniprot.org/citations/17041588" target="_blank">17041588</a>, PubMed:<a href="http://www.uniprot.org/citations/24209620" target="_blank">24209620</a>). DCX(DET1-COP1) directs ubiquitination of JUN (PubMed:<a href="http://www.uniprot.org/citations/14739464" target="_blank">14739464</a>). DCX(DDB2) directs ubiquitination of XPC (PubMed:<a href="http://www.uniprot.org/citations/15811626" target="_blank">15811626</a>). 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:<a href="http://www.uniprot.org/citations/16678110" target="_blank">16678110</a>, PubMed:<a href="http://www.uniprot.org/citations/17041588" target="_blank">17041588</a>, PubMed:<a href="http://www.uniprot.org/citations/24209620" target="_blank">24209620</a>). 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:<a href="http://www.uniprot.org/citations/14578910" target="_blank">14578910</a>, PubMed:<a href="http://www.uniprot.org/citations/15548678" target="_blank">15548678</a>, PubMed:<a href="http://www.uniprot.org/citations/15448697" target="_blank">15448697</a>). DCX(DTL) directs autoubiquitination of DTL (PubMed:<a href="http://www.uniprot.org/citations/23478445" target="_blank">23478445</a>). In association with DDB1 and SKP2 probably is involved in ubiquitination of CDKN1B/p27kip (PubMed:<a href="http://www.uniprot.org/citations/16537899" target="_blank">16537899</a>). Is involved in ubiquitination of HOXA9 (PubMed:<a href="http://www.uniprot.org/citations/14609952" target="_blank">14609952</a>). The DDB1-CUL4A- DTL E3 ligase complex regulates the circadian clock function by mediating the ubiquitination and degradation of CRY1 (PubMed:<a href="http://www.uniprot.org/citations/26431207" target="_blank">26431207</a>). 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:<a href="http://www.uniprot.org/citations/29779948"

target="_blank">29779948</a>). 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:<a href="http://www.uniprot.org/citations/33854232" target="_blank">33854232</a>, PubMed:<a href="http://www.uniprot.org/citations/33854239" target="_blank">33854239</a>). 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:<a href="http://www.uniprot.org/citations/30166453" target="_blank">30166453</a>). With CUL4B, contributes to ribosome biogenesis (PubMed:<a href="http://www.uniprot.org/citations/26711351" target="_blank">26711351</a>).

**Cullin 4A (CUL4A) Antibody (C-term) Blocking peptide - Protocols**

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

- Blocking Peptides

**Cullin 4A (CUL4A) Antibody (C-term) Blocking peptide - Images**

**Cullin 4A (CUL4A) Antibody (C-term) Blocking peptide - Background**

Core component of multiple cullin-RING-based E3 ubiquitin-protein ligase complexes which mediate the ubiquitination and subsequent proteasomal degradation of target proteins. As a scaffold protein may contribute to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme. 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. The functional specificity of the E3 ubiquitin-protein ligase complex depends on the variable substrate recognition component. DCX(DET1-COP1) directs ubiquitination of JUN. DCX(DDB2) directs ubiquitination of XPC. In association with RBX1, DDB1 and DDB2 is required for histone H3 and histone H4 ubiquitination in response to ultraviolet and may be important for subsequent DNA repair. DCX(DTL) plays a role in PCNA-dependent polyubiquitination of CDT1 and MDM2-dependent ubiquitiantion of TP53 in response to radiation-induced DNA damage and during DNA replication. In association with DDB1 and SKP2 probably is involved in ubiquitination of CDKN1B/p27kip. Is involved in ubiquitination of HOXA9.

**Cullin 4A (CUL4A) Antibody (C-term) Blocking peptide - References**

Huang,J.,Oncogene 27 (29), 4056-4064 (2008)Hu,J.,Genes Dev. 22 (7), 866-871 (2008)Wen,X., J. Biol. Chem. 282 (37), 27046-27057 (2007)