

Cullin 4A / CUL4A Antibody (N-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS11320

Specification

Cullin 4A / CUL4A Antibody (N-Terminus) - Product Information

| | |
|-------------------|------------------------|
| Application | IHC |
| Primary Accession | Q13619 |
| Reactivity | Human |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 88kDa KDa |

Cullin 4A / CUL4A Antibody (N-Terminus) - Additional Information

Gene ID 8451

Other Names

Cullin-4A, CUL-4A, CUL4A

Target/Specificity

Amino acids 1-20 of Human Cul4A (N-terminus) coupled to KLH.

Reconstitution & Storage

+4°C or -20°C, Avoid repeated freezing and thawing.

Precautions

Cullin 4A / CUL4A Antibody (N-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

Cullin 4A / CUL4A Antibody (N-Terminus) - 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).

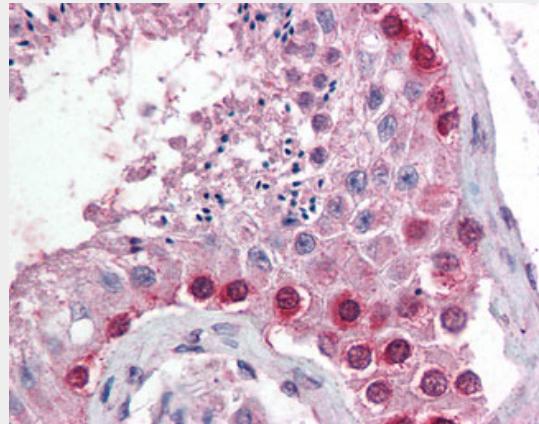
Volume

50 µl

Cullin 4A / CUL4A Antibody (N-Terminus) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Cullin 4A / CUL4A Antibody (N-Terminus) - Images

Anti-CUL4A / Cullin 4A antibody IHC of human testis.

Cullin 4A / CUL4A Antibody (N-Terminus) - Background

Core component of multiple cullin-RING-based E3 ubiquitin-protein ligase complexes which mediate the ubiquitination 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. 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. DCX(DTL) plays a role in PCNA-dependent polyubiquitination of CDT1 and MDM2-dependent ubiquitination 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. DCX(DTL) directs autoubiquitination of DTL.

Cullin 4A / CUL4A Antibody (N-Terminus) - References

- Chen L.-C.,et al.Cancer Res. 58:3677-3683(1998).
Higa L.A.,et al.Nat. Cell Biol. 5:1008-1015(2003).
Matsuda N.,et al.DNA Repair 4:537-545(2005).
Dunham A.,et al.Nature 428:522-528(2004).
Osaka F.,et al.Genes Dev. 12:2263-2268(1998).