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Anti-Cul7 (C-terminal specific) (RABBIT) Antibody
Cul7 Antibody
Catalog # ASR3719

Specification

Anti-Cul7 (C-terminal specific) (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, IHC, E, IP, I, LCI**
Application Note	**Anti-Cul7 has been tested by immunohistochemistry. This antibody reacts with human and mouse Cul7 by western blot and immunoprecipitation. The antibody immunoprecipitates in vitro translated protein and also immunoprecipitates protein from cell lysates (using HeLa, NIH-3T3, and others). This antibody also co-immunoprecipitates associated proteins in overexpressed CUL7 systems. A 191.2 kDa band corresponding to human Cul7 is detected. Most cell lines expressing Cul7 can be used as a positive control. Researchers should determine optimal titers for other applications.**
Physical State	**Liquid (sterile filtered)**
Immunogen	**This antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the C-Terminus region near amino acids 1675-1698 of Human Cul7 coupled to KLH.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Cul7 (C-terminal specific) (RABBIT) Antibody - Additional Information

Gene ID 9820

Other Names
9820

Purity
This product is monospecific antiserum processed by delipidation and defibrination followed by sterile filtration. This product reacts with human and mouse Cullin 7. Cross reactivity with other human cullins may occur.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended

storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Cul7 (C-terminal specific) (RABBIT) Antibody - Protein Information

Name CUL7

Synonyms KIAA0076

Function
Core component of the 3M and Cul7-RING(FBXW8) complexes, which mediate the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:12481031, PubMed:12904573, PubMed:21572988, PubMed:21737058, PubMed:24793695, PubMed:35982156). Core component of the 3M complex, a complex required to regulate microtubule dynamics and genome integrity (PubMed:21572988, PubMed:21737058, PubMed:24793695). It is unclear how the 3M complex regulates microtubules, it could act by controlling the level of a microtubule stabilizer (PubMed:24793695). The Cul7-RING(FBXW8) complex alone lacks ubiquitination activity and does not promote polyubiquitination and proteasomal degradation of p53/TP53 (PubMed:16547496, PubMed:17332328, PubMed:35982156). However it mediates recruitment of p53/TP53 for ubiquitination by neddylated CUL1-RBX1 (PubMed:35982156). Interaction with CUL9 is required to inhibit CUL9 activity and ubiquitination of BIRC5 (PubMed:24793696). The Cul7-RING(FBXW8) complex also mediates ubiquitination and consequent degradation of target proteins such as GORASP1, IRS1 and MAP4K1/HPK1 (PubMed:21572988, PubMed:24362026). Ubiquitination of GORASP1 regulates Golgi morphogenesis and dendrite patterning in brain (PubMed:21572988). Mediates ubiquitination and degradation of IRS1 in a mTOR-dependent manner: the Cul7-RING(FBXW8) complex recognizes and binds IRS1 previously phosphorylated by S6 kinase (RPS6KB1 or RPS6KB2) (PubMed:18498745). The Cul7-RING(FBXW8) complex also mediates ubiquitination of MAP4K1/HPK1: recognizes and binds autophosphorylated MAP4K1/HPK1, leading to its degradation, thereby affecting cell proliferation and differentiation (PubMed:24362026). Acts as a regulator in trophoblast cell epithelial-mesenchymal transition and placental development (PubMed:20139075). While the Cul7-RING(FBXW8) and the 3M complexes are associated and involved in common processes, CUL7 and the Cul7-RING(FBXW8) complex may have additional functions. Probably

plays a role in the degradation of proteins involved in endothelial proliferation and/or differentiation.

Cellular Location
Cytoplasm. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, perinuclear region. Golgi apparatus. Note=Colocalizes with FBXW8 at the Golgi apparatus in neurons; localization to Golgi is mediated by OBSL1. During mitosis, localizes to the mitotic apparatus (PubMed:24793695). CCDC8 is required for centrosomal location (PubMed:24793695)

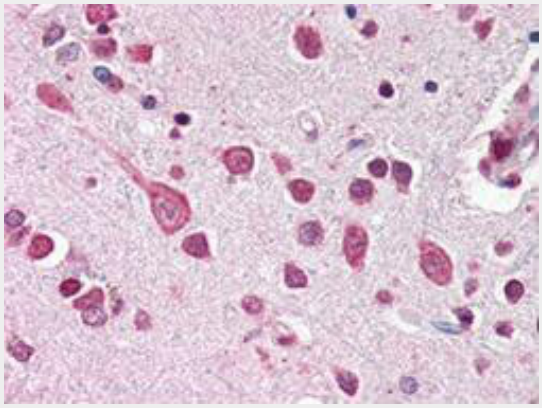
Tissue Location
Highly expressed in fetal kidney and adult skeletal muscle. Also abundant in fetal brain, as well as in adult pancreas, kidney, placenta and heart. Detected in trophoblasts, lymphoblasts, osteoblasts, chondrocytes and skin fibroblasts

Anti-Cul7 (C-terminal specific) (RABBIT) Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Cul7 (C-terminal specific) (RABBIT) Antibody - Images



Rockland's Anti-CUL7 antibody was diluted 1:500 to detect CUL7 in human brain cortex tissue. Tissue was formalin fixed and paraffin embedded. No pre-treatment of sample was required. The image shows the localization of antibody as the precipitated red signal, with a hematoxylin purple nuclear counter stain.

Anti-Cul7 (C-terminal specific) (RABBIT) Antibody - Background

Cullins assemble a potentially large number of ubiquitin ligases by binding to the RING protein ROC1 to catalyse polyubiquitination, as well as binding to various specificity factors to recruit substrates. Cullin 7 is a component of E3 ubiquitin ligase complexes, which mediate the ubiquitination and subsequent proteasomal degradation of target proteins. Cullin 7 seems to be involved proteosomal degradation of proteins involved in endothelial proliferation and/or

differentiation. Cullin 7 is part of a SCF-like complex consisting of CUL7, RBX1, SKP1, FBXW8 and GLMN isoform 1. Cullin 7 interacts with a complex of SKP1 and FBXW8, but not with SKP1 alone.