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Datasheet for 100-401-A06

Cul7 Antibody

Overview

Description:	Anti-Cul7 (C-terminal specific) (RABBIT) Antibody - 100-401-A06
Item No.:	100-401-A06
Size:	100 µL
Applications:	IHC, IP, WB, Other
Reactivity:	Human
Host Species:	Rabbit

Product Details

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.
Synonyms:	rabbit anti-Cul7 Antibody, rabbit anti-Cullin7 antibody, CUL, Cullin
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	CUL7
Reactivity:	Human
Immunogen Type:	Conjugated Peptide
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.

Purity/Specificity:	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.
Relevant Links:	• NCBI - 41872646 • UniProtKB - Q14999 • GeneID - 9820

Application Details

Tested Applications:	IHC, IP, WB
Suggested Applications:	Other (Based on references)
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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:2,000 - 1:10,000
IHC:	User Optimized
IP:	User Optimized
WB:	1:500 - 1:1,000

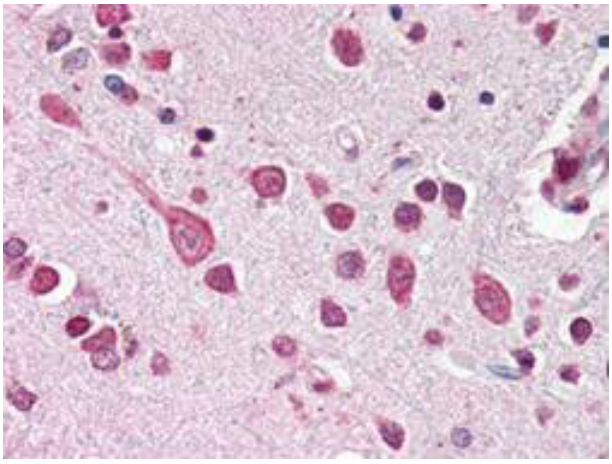
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	85 mg/mL by Refractometry
Buffer:	None
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

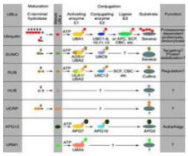
Shipping & Handling

Shipping Condition:	Dry Ice
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.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Immunohistochemistry
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.



Pathway
Most modifiers mature by proteolytic processing from inactive precursors (a; amino acid). Arrowheads point to the cleavage sites. Ubiquitin is expressed either as polyubiquitin or as a fusion with ribosomal proteins. Conjugation requires activating (E1) and conjugating (E2) enzymes that form thiolesters (S) with the modifiers. Modification of cullins by RUB involves SCF(SKP1/cullin-1/F-box protein) /CBC(cullin-2/elongin B/elonginC) -like E3 enzymes that are also involved in ubiquitination. In contrast to ubiquitin, the UBLs do not seem to form multi-UBL chains. UCRP(ISG15) resembles two ubiquitin moieties linked head-to-tail. Whether HUB1 functions as a modifier is currently unclear. APG12 and URM1 are distinct from the other modifiers because they are unrelated in sequence to ubiquitin. Data contributed by S.Jentsch, see references below.

References

- Islam S et al. FBXW8 regulates G1 and S phases of cell cycle progression by restricting β-TrCP1 function. *FEBS J.* (2021)
- Islam S et al. Co-operative binding of SKP1, Cullin1 and Cullin7 to FBXW8 results in Cullin1-SKP1-FBXW8-Cullin7 functional complex formation that monitors cellular function of β-TrCP1. *Int J Biol Macromol.* (2021)

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