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Anti-Cullin 2 Antibody

Catalog # AP59741

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q13617
Reactivity	Human, Mouse, Rat, Pig, Chicken, Bovine, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	86983

Additional Information

Gene ID	8453
Other Names	Cullin-2; CUL-2
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Cullin 2. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

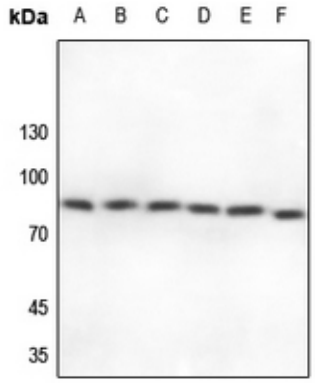
Protein Information

Name	CUL2 (HGNC:2552)
Function	Core component of multiple cullin-RING-based ECS (ElonginB/C-CUL2/5-SOCS-box protein) E3 ubiquitin-protein ligase complexes, which mediate the ubiquitination of target proteins (PubMed:11384984, PubMed:26138980, PubMed:29775578, PubMed:29779948, PubMed:37844242, PubMed:38326650). CUL2 serves as a rigid scaffold in the complex and may contribute to catalysis through positioning of the substrate and the E2 ubiquitin-conjugating enzyme (PubMed:10973499, PubMed:11384984, PubMed:12609982, PubMed:24076655, PubMed:9122164, PubMed:37844242, PubMed:38326650). 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:12609982, PubMed:24076655, PubMed:27565346, PubMed:38326650). The functional specificity of the ECS complex depends on the substrate recognition component (PubMed:10973499, PubMed:26138980, PubMed:29775578, PubMed:29779948, PubMed:9122164,

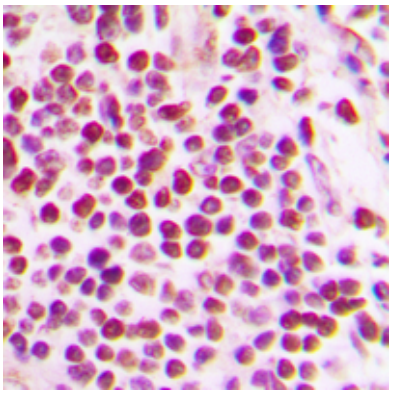
PubMed:38326650). ECS(VHL) mediates the ubiquitination of hypoxia-inducible factor (HIF) (PubMed:10973499, PubMed:9122164). A number of ECS complexes (containing either KLHDC2, KLHDC3, KLHDC10, APPBP2, FEM1A, FEM1B or FEM1C as substrate-recognition component) are part of the DesCEND (destruction via 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:26138980, PubMed:29775578, PubMed:29779948, PubMed:37844242). ECS complexes and ARIH1 collaborate in tandem to mediate ubiquitination of target proteins (PubMed:27565346). ECS(LRR1) ubiquitinates MCM7 and promotes CMG replisome disassembly by VCP and chromatin extraction during S- phase (By similarity).

Cellular Location Nucleus {ECO:0000250|UniProtKB:Q9D4H8}.

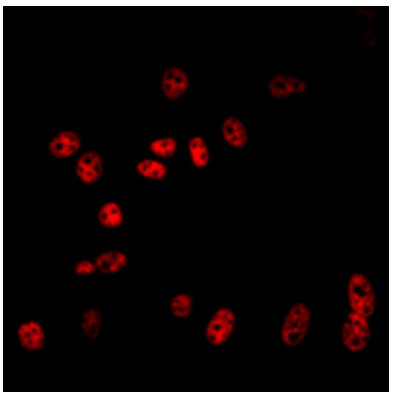
Images



Western blot analysis of Cullin 2 expression in Hela (A), A549 (B), mouse lung (C), mouse testis (D), rat lung (E), rat testis (F) whole cell lysates. (Predicted band size: 86 kD; Observed band size: 87 kD)

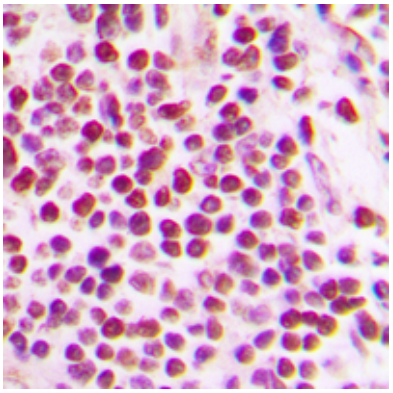


Immunohistochemical analysis of Cullin 2 staining in human tonsil formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Cullin 2 staining in NIH3T3 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

Immunohistochemical analysis of Cullin 2 staining in human tonsil formalin fixed paraffin embedded tissue



section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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