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Cullin 5 Rabbit pAb

Catalog # AP98724

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q93034
Other Accession	Q93034
Predicted	Rat, Human, Mouse, Rabbit, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	90955
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Cullin 5
Epitope Specificity	701-780/780
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the cullin family.
SUBUNIT	Component of multiple ECS (Elongin BC-CUL2/5-SOCS-box protein) E3 ubiquitin-protein ligase complexes formed of CUL5, Elongin BC (TCEB1 and TCEB2), RBX2 and a variable SOCS box domain-containing protein as substrate-specific recognition component. Component of the probable ECS(LRRC41) complex with the substrate recognition component LRRC41. Component of the probable ECS(SOCS1) complex with the substrate recognition component SOCS1. Component of the probable ECS(WSB1) complex with the substrate recognition subunit WSB1. Component of the probable ECS(SOCS3) complex with the substrate recognition component SOCS3. Component of the probable ECS(SPSB1) complex with the substrate recognition component SPSB1. Component of the probable ECS(SPSB2) complex with the substrate recognition component SPSB2. Component of the probable ECS(SPSB4) complex with the substrate recognition component SPSB4. Component of the probable ECS(RAB40C) complex with the substrate recognition subunit RAB40C. May also form complexes containing CUL5, elongin BC complex (TCEB1 and TCEB2), RBX1 and TCEB3. May also form complexes containing CUL5, Elongin BC (TCEB1 and TCEB2), RBX1 and VHL. The substrate recognition component can also be a viral protein such as HIV Vif, or human adenovirus 5 E1B large T-antigen and E4-orf6. Interacts with RNF7/RBX2, LRRC41, SOCS3, SPSB1, SPSB2, SPSB4 and RAB40C. Interacts with ASB1, ASB2, ASB6, ASB7 and ASB12.
Post-translational modifications	Neddylated. Deneddylated via its interaction with the COP9 signalosome (CSN) complex.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Core component of multiple SCF-like ECS (Elongin-Cullin 2/5-SOCS-box protein) 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 functional specificity of the E3 ubiquitin-protein ligase complex depends on the variable substrate

recognition component. ECS(SOCS1) seems to direct ubiquitination of JAk2. Seems to be involved poteosomal degradation of p53/TP53 stimulated by adenovirus E1B-55 kDa protein. May form a cell surface vasopressin receptor.

Additional Information

Gene ID 8065

Other Names CUL-5; VACM-1; VACM1; 4921514I20Rik; 8430423K24Rik; C030032G03Rik; C330021I08Rik; CUL5_HUMAN; CUL5; Vasopressin-activated calcium-mobilizing receptor 1 (VACM-1); CUL5_MOUSE; CUL5_RAT; cullin 5

Dilution IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000

Storage Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name CUL5 {ECO:0000303|PubMed:10230407, ECO:0000312|HGNC:HGNC:2556}

Function Core component of multiple cullin-5-RING E3 ubiquitin-protein ligase complexes (ECS complexes, also named CRL5 complexes), which mediate the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:11384984, PubMed:15601820, PubMed:21199876, PubMed:21980433, PubMed:23897481, PubMed:25505247, PubMed:27910872, PubMed:32200094, PubMed:33268465, PubMed:35512830, PubMed:38418882, PubMed:40963025). Acts a scaffold protein that contributes to catalysis through positioning of the substrate and the ubiquitin-conjugating enzyme (PubMed:11384984, PubMed:15601820, PubMed:33268465). The functional specificity of the E3 ubiquitin-protein ligase complex depends on the variable SOCS box-containing substrate recognition component (PubMed:11384984, PubMed:15601820, PubMed:33268465). Acts as a key regulator of neuron positioning during cortex development: component of various SOCS-containing ECS complexes, such as the ECS(SOCS7) complex, that regulate reelin signaling by mediating ubiquitination and degradation of DAB1 (By similarity). ECS(SOCS1) seems to direct ubiquitination of JAK2 (PubMed:11384984). The ECS(SOCS2) complex mediates the ubiquitination and subsequent proteasomal degradation of phosphorylated EPOR and GHR (PubMed:21980433, PubMed:25505247). The ECS(SPSB3) complex catalyzes ubiquitination of nuclear CGAS (PubMed:38418882). ECS(KLHDC1) complex is part of the DesCEND (destruction via C-end degrons) pathway and mediates ubiquitination and degradation of truncated SELENOS selenoprotein produced by failed UGA/Sec decoding, which ends with a glycine (PubMed:32200094). The ECS(ASB9) complex mediates ubiquitination and degradation of CKB (PubMed:33268465). As part of some ECS complex, promotes 'Lys-11'-linked ubiquitination and degradation of BTRC (PubMed:27910872). As part of a multisubunit ECS complex, polyubiquitinates monoubiquitinated POLR2A (PubMed:19920177). As part of the ECS(RAB40C) complex, mediates ANKRD28 ubiquitination and degradation, thereby inhibiting protein phosphatase 6 (PP6) complex activity and focal adhesion assembly during cell migration (PubMed:35512830). As part of the ECS(RAB40A) complex, mediates RHOU 'Lys-48'-linked ubiquitination and degradation, thus inhibiting focal adhesion

disassembly during cell migration (PubMed:26598620). As part of the ECS(RAB40B) complex, mediates LIMA1/EPLIN and RAP2 ubiquitination, thereby regulating actin cytoskeleton dynamics and stress fiber formation during cell migration (PubMed:33999101, PubMed:35293963). The ECS(ASB7) complex acts a negative regulator of H3K9me3 histone mark by mediating ubiquitination and degradation of SUV39H1 (PubMed:40440427). As part of the ECS(LRRC58) complex, mediates CDO1 ubiquitination and degradation, regulating cysteine catabolism (PubMed:40963025). May form a cell surface vasopressin receptor (PubMed:9037604).

Cellular Location

Nucleus. Note=Localizes to sites of DNA damage in a UBAP2 and UBAP2L-dependent manner.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.