

Product Specification Sheet

Product: Anti-Human APC11 (C-terminal specific) [RABBIT]

Code: 100-401-A15

Lot #: 15408

Size: 100 µl

Physical State: Liquid (sterile filtered)

Protein Concentration: 85 mg/ml (by Refractometry)

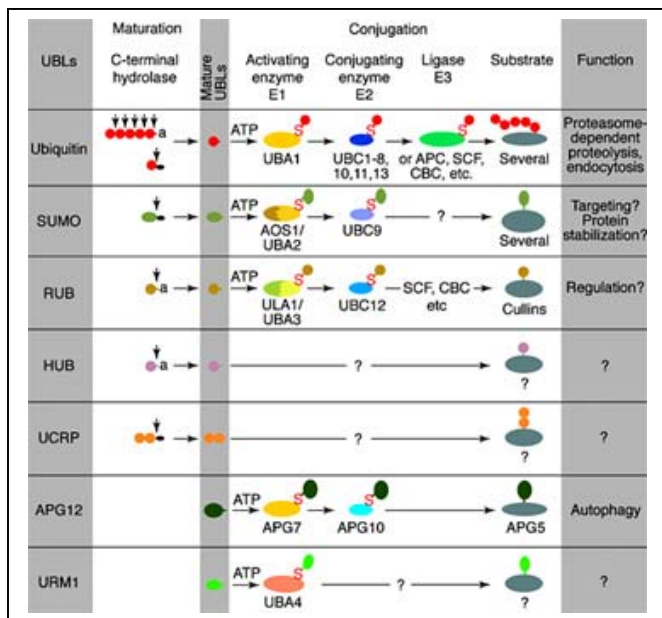
Buffer: None

Stabilizer: None

Preservative: 0.01% (w/v) Sodium Azide

Storage Conditions: 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 date is one (1) year from date of opening.

Background Information: APC11 is also known as Anaphase promoting complex subunit 11, APC11, Cyclosome subunit 11, Hepatocellular carcinoma associated RING finger protein, and HSPC214. APC11 is a component of the anaphase promoting complex/cyclosome (APC/C), a cell cycle-regulated E3 ubiquitin ligase that controls progression through mitosis and the G₁ phase of the cell cycle. APC11 may function to recruit the E2 ubiquitin-conjugating enzymes to the complex. APC11 interacts with the cullin domain of ANAPC2 and also interacts with UBE2D2. APC11 shows both a cytoplasmic and nuclear localization. APC11 is expressed at high levels in skeletal muscle and heart; in moderate levels in brain, kidney, and liver; and at low levels in colon, thymus, spleen, small intestine, placenta, lung and peripheral blood leukocyte. APC11 is a member of the RING-type zinc finger family and is auto-ubiquitinated.



Application Note(s): This antibody reacts with human APC11 by western blot and immunoprecipitation. The antibody immunoprecipitates *in vitro* translated protein and protein from overexpressing cell lysates (using HeLa and NIH-3T3, and others). Coimmunoprecipitation of related proteins (APC2) does occur. A 9.8 kDa band corresponding to human APC11 is detected. Most cell lines or tissues expressing APC11 can be used as a positive control. Researchers should determine optimal titers for other applications.

Figure. Conjugation pathways for ubiquitin and ubiquitin-like modifiers (UBLs). 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 thioesters (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.

Recommended Dilution(s):	ELISA	1:2,000 - 1:10,000
	WESTERN BLOT	1:500 - 1:1,000
	IMMUNOHISTOCHEMISTRY	User Optimized
	OTHER APPLICATIONS	User Optimized

Purity and Specificity: This product is monospecific antiserum processed by delipidation and defibrination followed by sterile filtration. This product reacts with human and mouse APC11. Cross reactivity may also occur with APC11 from other sources. Sufficient sequence differences exist to suggest that this antibody would not react with other RING box proteins such as ROC1 and ROC2.

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Immunogen: This antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 76-84 of Human APC11 (C-terminal) coupled to KLH.

Protein Sequence: Human APC11 (84 aa 9.8 kDa)

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1  mkvkikcwnq  vatwlvvand  encgicrmaf  ngccpdckvp  gddcplvwgq  cshcfhmhci
61  lkwlhaqqvq  qhcpmcrqew  kfke

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Related Link(s): Accession # [Q9NYG5](#) or [Q9NYG5](#)

Specific Reference(s):

Ohta T, Michel JJ, Xiong Y, (1999) Association with cullin partners protects ROC proteins from proteasome-dependent degradation. *Oncogene* **18**:48, 6758-6766.

Furukawa M, Ohta T, Xiong Y, (2002) Activation of UBC5 ubiquitin-conjugating enzyme by the RING finger of ROC1 and assembly of active ubiquitin ligases by all cullins. *J Biol Chem* **277**:18, 15758-15765.

General Reference(s):

Jentsch S, Pyrowolakis G. (2000) Ubiquitin and its kin: how close are the family ties? *Trends Cell Biol.* **10**(8):335-42.

Chan, A.H., Lee, S.M., Chim, S.S., Kok, L.D., Waye, M.M., Lee, C.Y., Fung, K.P. and Tsui, S.K. (2001) Molecular cloning and characterization of a RING-H2 finger protein, ANAPC11, the human homolog of yeast Apc11p. *J. Cell. Biochem.* **83** (2), 249-258.

Gmachl, M., Gieffers, C., Podtelejnikov, A.V., Mann, M. and Peters, J.M. (2000) The RING-H2 finger protein APC11 and the E2 enzyme UBC4 are sufficient to ubiquitinate substrates of the anaphase-promoting complex. *Proc. Natl. Acad. Sci. U.S.A.* **97** (16), 8973-8978.

Tang, Z., Li, B., Bharadwaj, R., Zhu, H., Ozkan, E., Hakala, K., Deisenhofer, J. and Yu, H. (2001) APC2 Cullin protein and APC11 RING protein comprise the minimal ubiquitin ligase module of the anaphase-promoting complex. *Mol. Biol. Cell* **12** (12), 3839-3851.

Related Product(s):

#100-401-A01 Anti-Human Cul1 (RABBIT)	#100-401-A08 Anti-Human SLP1 (RABBIT)	#100-401-A15 Anti-Human APC11 (RABBIT)
#100-401-A02 Anti-Human Cul2 (RABBIT)	#100-401-A09 Anti-Human DDB1 (RABBIT)	#100-401-A15 Anti-Human APC11 (RABBIT)
#100-401-A03 Anti-Human Cul3 (RABBIT)	#100-401-A10 Anti-Human DDB2 (RABBIT)	#100-401-A15 Anti-Human APC2 (RABBIT)
#100-401-A04 Anti-Human Cul4A (RABBIT)	#100-401-A11 Anti-Human CAND1 (RABBIT)	#100-401-A09 Anti-Human cdc20 (RABBIT)
#100-401-A05 Anti-Human Cul5 (RABBIT)	#100-401-A12 Anti-Human CAND2 (RABBIT)	#611-703-127 HRP Dnky-a-Rabbit IgG [H&L]
#100-401-A06 Anti-Human Cul7 (RABBIT)	#100-401-A13 Anti-Human ROC1 (RABBIT)	#611-132-122 IRDye800 Gt-a-Rabbit IgG [H&L]
#100-401-A07 Anti-Human PARC (RABBIT)	#100-401-A14 Anti-Human ROC2 (RABBIT)	

USDA Certification: All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation.

Note: This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information.