

APC2 Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	100	Rabbit	#Q9UJX6	29882

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

APC2 Antibody recognizes endogenous levels of total APC2 protein.

Species predicted to react based on 100% sequence homology

Hamster, Bovine, Dog, Guinea Pig

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys458 of human APC2 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Cell proliferation in all eukaryotic cells depends strictly upon the ubiquitin ligase (E3) activity of the anaphase promoting complex/cyclosome (APC/C), whose main function is to trigger the transition of the cell cycle from metaphase to anaphase. APC/C performs its various functions by promoting the assembly of polyubiquitin chains on substrate proteins, which targets these proteins for degradation by the 26S proteasome (1,2). In humans, twelve different APC/C subunits have been identified. Like all E3 enzymes, APC/C utilizes ubiquitin residues that have been activated by E1 enzymes and then transferred to E2 enzymes. Indeed, APC/C has been shown to interact with UBE2S and UBE2C E2 enzymes, in part, via the RING-finger domain-containing subunit, APC11 (3-5). APC/C activity is also strictly dependent upon its association with multiple cofactors. For example, the related proteins, Cdc20 and Cdh1/FZR1, participate in the recognition of APC/C substrates by interacting with specific recognition elements in these substrates (6), called D-boxes (7) and KEN-boxes (8). Anaphase-promoting complex subunit 2 (APC2) is a distant member of the cullin family (9,10) that interacts with a RING-H2 finger protein related to Rbx1/Hrt1/Roc1, called APC11, to form the catalytic subcomplex of the APC/C. The APC2/11 subcomplex recruits E2 enzymes such as UBE2C/UBCH10 and is required for the APC/C to catalyze substrate ubiquitination (11). Therefore, APC is a member of the expanding family of cullin-RING finger-based ubiquitin ligases. The physiologic importance of APC2 was underscored by the finding that disruption of murine *Apc2* causes embryonic lethality (12).

Background References

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4. Gmachl, M. et al. (2000) *Proc Natl Acad Sci U S A* 97, 8973-8.
5. Leversson, J.D. et al. (2000) *Mol Biol Cell* 11, 2315-25.
6. Kraft, C. et al. (2005) *Mol Cell* 18, 543-53.
7. Glotzer, M. et al. (1991) *Nature* 349, 132-8.
8. Pflieger, C.M. and Kirschner, M.W. (2000) *Genes Dev* 14, 655-65.
9. Zachariae, W. et al. (1998) *Science* 279, 1216-9.
10. Yu, H. et al. (1998) *Science* 279, 1219-22.
11. Tang, Z. et al. (2001) *Mol Biol Cell* 12, 3839-51.
12. Wirth, K.G. et al. (2004) *Genes Dev* 18, 88-98.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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