

APC2 Antibody



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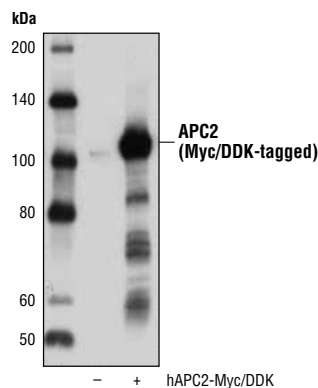
Applications W, IP Endogenous	Species Cross-Reactivity* H, M, R, Mk, (Hm, B, Dg)	Molecular Wt. 100 kDa	Source Rabbit**
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Background: Cell proliferation in all eukaryotic cells depends strictly upon the ubiquitin ligase (E3) activity of the anaphase promoting complex/cyclosome (APC/C), whose main function is to trigger the transition of the cell cycle from metaphase to anaphase. APC/C is a 1.5 MDa protein complex found in the nucleus of interphase cells. This complex diffuses throughout the cytoplasm and associates with parts of the spindle apparatus during mitosis. 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 that has been activated by E1 enzymes and then transferred to E2 enzymes. Indeed APC/C has been shown to transiently interact with UBCH5 and UBCH10 E2 enzymes, in part, via the RING-finger domain-containing subunit, APC11 (3-5). In addition to E2 enzymes, APC/C activity is also strictly dependent upon one of several cofactors that associate with APC/C during specific phases of the cell cycle. The best studied of these are Cdc20 and Cdh1/FZR1, which contain a C-terminal WD40 domain and 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).

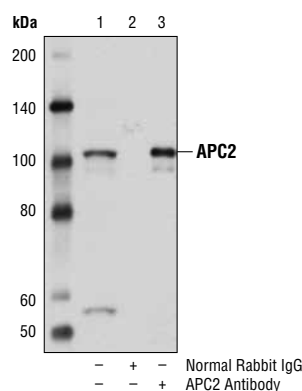
Anaphase-promoting complex subunit 2 (APC2) is a distant member of the cullin family (9,10) that interacts with a RING-H2 finger protein related to Rbx1/Hrt1/Roc1, called APC11, to form the catalytic subcomplex of the APC/C. The APC2/11 subcomplex recruits E2 enzymes such as UBE2C/UBCH10 and is required 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).

Specificity/Sensitivity: APC2 Antibody recognizes endogenous levels of total APC2 protein.

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.



Western blot analysis of extracts from 293T cells, either mock transfected (-) or transfected with a construct expressing Myc/DDK-tagged full-length human APC2 (hAPC2-Myc/DDK; +), using APC2 Antibody.



Immunoprecipitation of APC2 from 293T cell extracts, using Normal Rabbit IgG #2729 (lane 2) or APC2 Antibody (lane 3). Lane 1 is 10% input. Western blot analysis was performed using APC2 Antibody.

Entrez-Gene ID #29882
Swiss-Prot Acc. #Q9UJX6

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

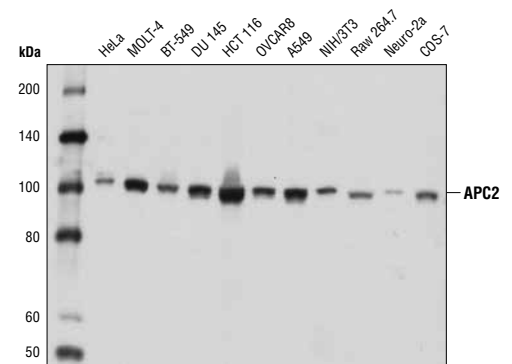
Western blotting	1:1000
Immunoprecipitation	1:100

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

Background References:

- (1) Qiao, X. et al. (2010) *Cell Cycle* 9, 3904-12.
- (2) Harper, J.W. et al. (2002) *Genes Dev* 16, 2179-206.
- (3) Carroll, C.W. and Morgan, D.O. (2002) *Nat Cell Biol* 4, 880-7.
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- (5) Leverson, 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.



Western blot analysis of extracts from various cell lines using APC2 Antibody.

IMPORTANT: For western blots, incubate membrane with diluted 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 IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.