

APC11 (D1E7Q) Rabbit mAb

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

Applications: W, IP	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 10	Source/Isotype: Rabbit IgG	UniProt ID: #Q9NYG5	Entrez-Gene Id: 51529
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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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

APC11 (D1E7Q) Rabbit mAb recognizes endogenous levels of total APC11 protein. This antibody does not cross-react with either RBX1 or RBX2.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a full-length human recombinant APC11 protein.

Background

Eukaryotic cell proliferation depends strictly upon the E3 ubiquitin ligase 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. The APC/C complex promotes the assembly of polyubiquitin chains on substrate proteins in order to target these proteins for degradation by the 26S proteasome (1,2). The vertebrate APC/C complex consists of as many as 15 subunits, including multiple scaffold proteins, two catalytic subunits (APC2, APC11), and a number of proteins responsible for substrate recognition (3). All E3 enzymes, including APC/C, utilize ubiquitin residues activated by E1 enzymes and transferred to E2 enzymes. Research studies indicate that APC/C interacts with the E2 enzymes UBE2S and UBE2C via the RING-finger domain-containing subunit APC11 (4-6). APC/C function relies on multiple cofactors, including an APC/C coactivator formed by the cell division control protein 20 homolog (CDC20) and Cdh1/FZR1. The CDC20/Cdh1 coactivator is responsible for recognition of APC/C substrates through interaction with specific D-box and KEN-box recognition elements within these substrates (7-9). Anaphase-promoting complex subunit 11 (APC11) harbors a RING-H2 motif, which is characterized by a series of non-tandem His and Cys residues responsible for the coordination of zinc cations. At the primary amino acid level, APC11 displays sequence similarity to RING-box proteins RBX1 and RBX2, which are the RING-H2 motif-containing subunits of SCF ubiquitin ligase complexes (10). A heterodimer complex containing APC11 and the cullin-like subunit, APC2, forms the catalytic core of the APC/C and is critical for the APC/C to catalyze ubiquitin chain elongation (4,11).

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. Chang, L. et al. (2014) *Nature* 513, 388-93.
4. Carroll, C.W. and Morgan, D.O. (2002) *Nat Cell Biol* 4, 880-7.
5. Gmachl, M. et al. (2000) *Proc Natl Acad Sci U S A* 97, 8973-8.
6. Leverson, J.D. et al. (2000) *Mol Biol Cell* 11, 2315-25.
7. Kraft, C. et al. (2005) *Mol Cell* 18, 543-53.
8. Glotzer, M. et al. (1991) *Nature* 349, 132-8.
9. Pflieger, C.M. and Kirschner, M.W. (2000) *Genes Dev* 14, 655-65.
10. Chan, A.H. et al. (2001) *J Cell Biochem* 83, 249-58.
11. Tang, Z. et al. (2001) *Mol Biol Cell* 12, 3839-51.

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 BSA, 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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