Store at -20°C

SignalSilence® APC6 siRNA II

#7164

10 µM in 300 µl (100 Transfections)

Support: +1-978-867-2388 (U.S.)
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rev. 02/18/16

Entrez-Gene ID #8881
UniProt ID # Q13042

For Research Use Only. Not For Use In Diagnostic Procedures.

Species Cross-Reactivity: H

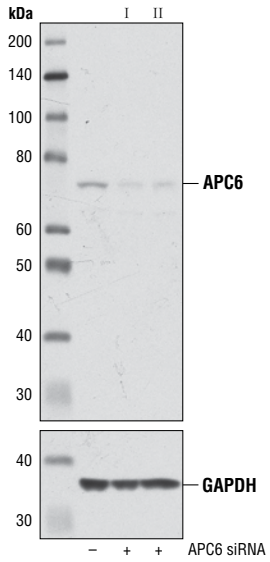
Description: SignalSilence® APC6 siRNA II from Cell Signaling Technology (CST) allows the researcher to specifically inhibit APC6 expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell. All SignalSilence® siRNA products from CST are rigorously tested in-house and have been shown to reduce target protein expression by western analysis.

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 6 (APC6, CDC16) is a component of the tetratricopeptide repeat (TPR) sub-complex of the APC/C, which includes APC8/CDC23 and APC3/CDC27. This sub-complex may play an important role in the recruitment of the APC/C activators, CDC20 and Cdh1 (10). Additional evidence suggests that phosphorylation of APC6 and the other TPR subunits during mitosis plays a functional role in regulating the association between TPR subunits and substrate recognition subunits such as Cdc20 (11).

Directions for Use: CST recommends transfection with 100 nM SignalSilence® APC6 siRNA II 48 to 72 hours prior to cell lysis. For transfection procedure, follow protocol provided by the transfection reagent manufacturer. Please feel free to contact CST with any questions on use.

Quality Control: Oligonucleotide synthesis is monitored base by base through trityl analysis to ensure appropriate coupling efficiency. The oligo is subsequently purified by affinity-solid phase extraction. The annealed RNA duplex is further analyzed by mass spectrometry to verify the exact composition of the duplex. Each lot is compared to the previous lot by mass spectrometry to ensure maximum lot-to-lot consistency.



Western blot analysis of extracts from 293T cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® APC6 siRNA I #7279 (+) or SignalSilence® APC6 siRNA II (+), using APC6 (D8D8) Rabbit mAb #9499 (upper) or GAPDH (D16H11) XP® Rabbit mAb #5174 (lower). The APC6 (D8D8) Rabbit mAb confirms silencing of APC6 expression, while the GAPDH (D16H11) XP® Rabbit mAb is used as a loading control.

Storage: SignalSilence® siRNA is supplied in RNAse-free water. Aliquot and store at -20°C.

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

Background References:

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(2) Harper, J.W. et al. (2002) *Genes Dev* 16, 2179-206.

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(7) Kraft, C. et al. (2005) *Mol Cell* 18, 543-53.

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Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **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.