SignalSilence® PARP siRNA II

#6305 Store at -20°C

☑ 10 µM in 300 µl
(100 transfections)

Cell Signaling TECHNOLOGY®

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New 08/10

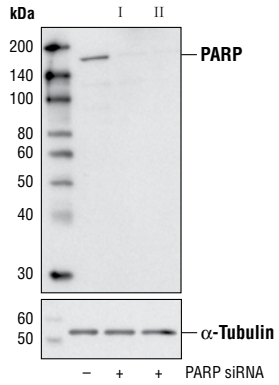
Species Cross-Reactivity: H

Description: SignalSilence® PARP siRNA II from Cell Signaling Technology (CST) allows the researcher to specifically inhibit PARP 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: PARP, a 116 kDa nuclear poly (ADP-ribose) polymerase, appears to be involved in DNA repair in response to environmental stress (1). This protein can be cleaved by many ICE-like caspases *in vitro* (2,3) and is one of the main cleavage targets of caspase-3 *in vivo* (4,5). In human PARP, the cleavage occurs between Asp214 and Gly215, which separates the PARP amino-terminal DNA binding domain (24 kDa) from the carboxy-terminal catalytic domain (89 kDa) (2,4). PARP helps cells to maintain their viability; cleavage of PARP facilitates cellular disassembly and serves as a marker of cells undergoing apoptosis (6).

Directions for Use: CST recommends transfection with 100 nM PARP 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 HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® PARP siRNA I #6304 (+) or SignalSilence® PARP siRNA II (+), using PARP (46D11) Rabbit mAb #9532 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The PARP (46D11) Rabbit mAb confirms silencing of PARP expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #142
Swiss-Prot Acc. #P09874

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

Background References:

(1) Satoh, M.S. and Lindahl, T. (1992) *Nature* 356, 356-358.
(2) Lazebnik, Y. A. et al. (1994) *Nature* 371, 346-347.
(3) Cohen, G.M. (1997) *Biochem. J.* 326, 1-16.
(4) Nicholson, D. W. et al. (1995) *Nature* 376, 37-43.
(5) Tewari, M. et al. (1995) *Cell* 81, 801-809.
(6) Oliver, F.J. et al. (1998) *J. Biol. Chem.* 273, 33533-33539.

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.