

#6522 Store at -20°C

SignalSilence® Chk1 siRNA II



✓ 10 µM in 300 µl (100 Transfections)

Orders ■ 877-616-CELL (2355) orders@cellsignal.com
Support ■ 877-678-TECH (8324) info@cellsignal.com
Web ■ www.cellsignal.com

rev. 02/11/16

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

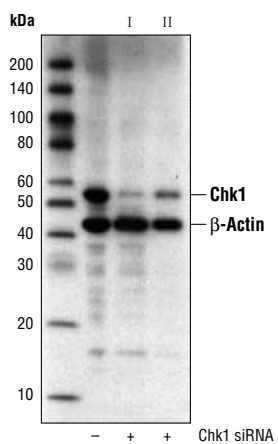
Species Cross-Reactivity: H, M, R

Description: SignalSilence® Chk1 siRNA II from Cell Signaling Technology (CST) allows the researcher to specifically inhibit Chk1 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 are rigorously tested in-house and have been shown to reduce protein expression by western analysis.

Background: Chk1 kinase acts downstream of ATM/ATR kinase to play an important role in DNA damage checkpoint control, embryonic development and tumor suppression (1). Activation of Chk1 involves phosphorylation of Ser317 and Ser345 and occurs in response to blocked DNA replication and certain forms of genotoxic stress (2). Chk1 is also phosphorylated at Ser280 and Ser296 following DNA damage. Activated Chk1 can inactivate cdc25C via phosphorylation at Ser216, blocking the activation of cdc2 and transition into mitosis (3). Chk1 can also phosphorylate p53 at Ser20 *in vitro* (4).

Directions for Use: CST recommends transfection with 50 nM Chk1 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 (Fluorescein Conjugate) #6201 (-) or SignalSilence® Chk1 siRNA I #6241 or SignalSilence® Chk1 siRNA II (+), using Chk1 (2G1D5) Mouse mAb #2360 and β-Actin (13E5) Rabbit mAb #4970. Chk1 (2G1D5) Mouse mAb confirms silencing of Chk1 expression and β-Actin (13E5) Rabbit mAb is used to control for loading and specificity of Chk1 siRNA.

Entrez-Gene ID #1111
Swiss-Prot Acc. #014757

Storage: Chk1 siRNA II is supplied in RNase-free water. Aliquot and store at -20°C.

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

Background References:

- (1) Martinho, R.G. et al. (1998) *EMBO J.* 17, 7239–7249.
- (2) Zhao, H. et al. (2001) *Mol. Cell. Biol.* 21, 4129–4139.
- (3) Zeng, Y. et al. (1998) *Nature* 395, 507–510.
- (4) Shieh, S. et al. (2000) *Genes Dev.* 14, 289–300.