

# SignalSilence® Chk1 siRNA II

✓ 10 µM in 300 µl  
(100 Transfections)

**Orders** ■ 877-616-CELL (2355)  
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New 11/08

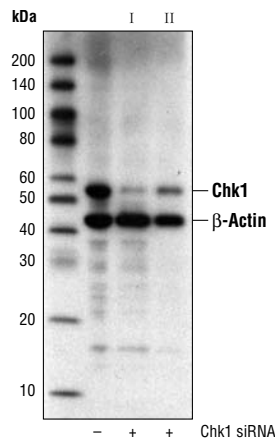
This product is for *in vitro* research use only and is not intended for use in humans or animals.  
This product is not intended for use as a therapeutic or in diagnostic procedures.

## Species Cross-Reactivity: H

**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.



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  $\beta$ -Actin (13E5) Rabbit mAb #4970. Chk1 (2G1D5) Mouse mAb confirms silencing of Chk1 expression and  $\beta$ -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.

## Companion Products:

SignalSilence® Control siRNA (Fluorescein Conjugate) #6201

SignalSilence® Control siRNA (Unconjugated) #6568

SignalSilence® Chk1 siRNA I #6241

SignalSilence® Chk1 siRNA Kit #6523

Chk1 (2G1D5) Mouse mAb #2360

## 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.