

#8622 Store at -20°C

SignalSilence® Rictor siRNA II



✓ 10 µM in 300 µl (100 Transfections)

Orders ■ 877-616-CELL (2355) orders@cellsignal.com
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For Research Use Only. Not For Use In Diagnostic Procedures.

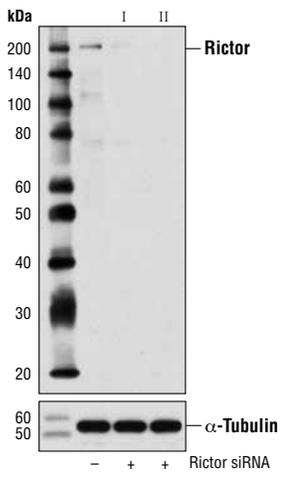
Species Cross-Reactivity: H

Description: SignalSilence® Rictor siRNA II from Cell Signaling Technology (CST) allows the researcher to specifically inhibit rictor 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: Cell growth is a fundamental biological process whereby cells accumulate mass and increase in size. The mammalian TOR (mTOR) pathway regulates growth by coordinating energy and nutrient signals with growth factor-derived signals (1). mTOR is a large protein kinase with two different complexes. One complex contains mTOR, GβL and raptor, which is a target of rapamycin. The other complex, insensitive to rapamycin, includes mTOR, GβL, Sin1, and rictor (1). The mTOR-rictor complex phosphorylates Ser473 of Akt/PKB *in vitro* (2). This phosphorylation is essential for full Akt/PKB activation. Furthermore, an siRNA knockdown of rictor inhibits Ser473 phosphorylation in 3T3-L1 adipocytes (3). This complex has also been shown to phosphorylate the rapamycin-resistant mutants of S6K1, another effector of mTOR (4).

Directions for Use: CST recommends transfection with 100 nM SignalSilence® Rictor 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 293 cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® Rictor siRNA I #8649 (+), or SignalSilence® Rictor siRNA II (+), using Rictor (53A2) Rabbit mAb #2114 (upper) or α-Tubulin (11H10) Rabbit mAb #2125 (lower). The Rictor (53A2) Rabbit mAb confirms silencing of rictor expression, while the α-Tubulin (11H10) Rabbit mAb is used as a loading control.

Entrez-Gene ID #253260
Swiss-Prot Acc. #Q6R327

Storage: Rictor 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) Sarbassov, D.D. et al. (2004) *Curr. Biol.* 14, 1296-1302.
- (2) Sarbassov, D.D. et al. (2005) *Science* 307, 1098-1101.
- (3) Hresko, R.C. and Mueckler, M. (2005) *J. Biol. Chem.* 280, 40406-40416.
- (4) Ali, S.M. and Sabatini, D.M. (2005) *J. Biol. Chem.* 280, 19445-19448.

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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.