Store at -20°C

#14178

SignalSilence® Hexokinase II siRNA I

www.cellsignal.com

Support: 877-678-TECH (8324)
info@cellsignal.com

Orders: 877-616-CELL (2355)
orders@cellsignal.com

New 06/14

Entrez-Gene ID #3099
UniProt ID #P52789

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

Species Cross-Reactivity: H

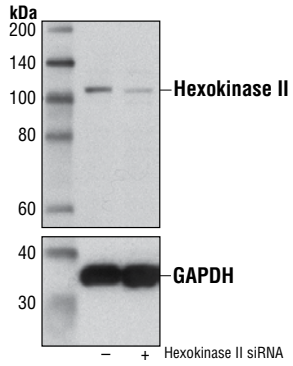
Description: SignalSilence® Hexokinase II siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit hexokinase II expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into 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: Hexokinase catalyzes the conversion of glucose to glucose-6-phosphate, the first step in glycolysis. Four distinct mammalian hexokinase isoforms, designated as hexokinase I, II, III, and IV (glucokinase), have been identified. Hexokinases I, II, and III are associated with the outer mitochondrial membrane and are critical for maintaining an elevated rate of aerobic glycolysis in cancer cells (Warburg Effect) (1) in order to compensate for the increased energy demands associated with rapid cell growth and proliferation (2,3).

Directions for Use: CST recommends transfection with 100 nM SignalSilence® Hexokinase II siRNA I 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.

Each vial contains the equivalent of 100 transfections, which corresponds to a final siRNA concentration of 100 nM per transfection in a 24-well plate with a total volume of 300 µl per well.

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 MCF7 cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® Hexokinase II siRNA I (+), using Hexokinase II (C64G5) Rabbit mAb #2867 (upper) or GAPDH (D16H11) XP® Rabbit mAb #5174 (lower). The Hexokinase II (C64G5) Rabbit mAb confirms silencing of hexokinase II expression, while the GAPDH (D16H11) XP® Rabbit mAb is used as a loading control.

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

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

Background References:

(1) Warburg, O. (1956) *Science* 123, 309-14.

(2) Semenza, G.L. (2000) *Crit. Rev. Biochem. Mol. Biol.* 35, 71-103.

(3) Smith, T.A. (2000) *Br. J. Biomed. Sci.* 57, 170-8.

Thank you for your recent purchase. If you would like to provide a review visit www.cellsignal.com/comments.

Cell Signaling TECHNOLOGY®

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.