

SignalSilence® CA2 siRNA II



✓ 10 µM in 300 µl (100 Transfections)

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

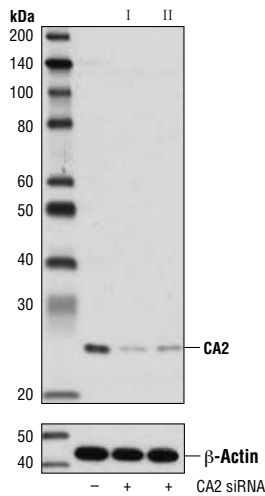
Species Cross-Reactivity: H

Description: SignalSilence® CA2 siRNA II from Cell Signaling Technology (CST) allows the researcher to specifically inhibit CA2 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: Carbonic anhydrases (CA) are a family of ancient zinc metalloenzymes found in almost all living organisms. All CA can be divided into 3 distinct classes (α , β , and γ) that evolved independently and have no significant homology in sequence and overall folding. All functional CA catalyze the reversible hydration of CO₂ into HCO₃⁻ and H⁺ and contain a zinc atom in the active sites essential for catalysis. There are many isoforms of CA in mammals and they all belong to the α class (1,2).

Directions for Use: CST recommends transfection with 100 nM SignalSilence® CA2 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 293T cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® CA2 siRNA I #7670 (+) or SignalSilence® CA2 siRNA II (+), using CA2 Antibody #8612 (upper) or β -Actin (13E5) Rabbit mAb #4970 (lower). The CA2 Antibody confirms silencing of CA2 expression, while the β -Actin (13E5) Rabbit mAb is used as a loading control.

Entrez-Gene ID #760
Swiss-Prot Acc. #P00918

Storage: CA2 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) Smith, K.S. et al. (1999) *Proc Natl Acad Sci USA* 96, 15184-9.
- (2) Tripp, B.C. et al. (2001) *J Biol Chem* 276, 48615-8.