

# SignalSilence® WFS1 siRNA I



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✓ 10 µM in 300 µl  
(100 transfections)

rev. 02/17/16

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

**Species Cross-Reactivity: H, (M, Mk)**

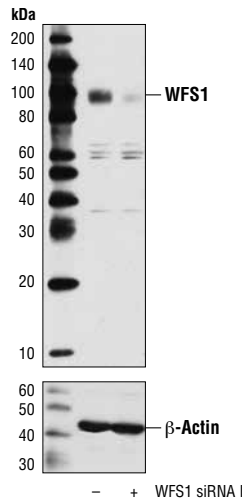
**Description:** SignalSilence® WFS1 siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit WFS1 expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell. All SignalSilence® siRNA products from CST are rigorously tested in-house and have been shown to reduce target protein expression by western analysis.

**Background:** Wolfram syndrome protein (WFS1) is an 890 amino acid protein that contains a cytoplasmic N-terminal domain, followed by nine-transmembrane domains and a luminal C-terminal domain. WFS1 is predominantly localized to the endoplasmic reticulum (ER) (1) and its expression is induced in response to ER stress, partially through transcriptional activation (2,3). Research studies have shown that mutations in the WFS1 gene lead to Wolfram syndrome, an autosomal recessive neurodegenerative disorder defined by young-onset, non-immune, insulin-dependent diabetes mellitus and progressive optic atrophy (4).

**Specificity/Sensitivity:** SignalSilence® WFS1 siRNA I inhibits human, mouse, and monkey WFS1 expression.

**Directions for Use:** CST recommends transfection with 100 nM SignalSilence® WFS1 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.

**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 (Unconjugated) #6568 (-) or SignalSilence® WFS1 siRNA I (+), using WFS1 Antibody #8749 (upper) and β-Actin (13E5) Rabbit mAb #4970 (lower). The WFS1 Antibody confirms silencing of WFS1 expression, while the β-Actin (13E5) Rabbit mAb is used as a loading control.

Entrez-Gene ID #7466  
Swiss-Prot Acc. #076024

**Storage:** WFS1 siRNA I is supplied in RNase-free water. Aliquot and store at -20°C.

**Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.**

**Background References:**

- (1) Takeda, K. et al. (2001) *Hum Mol Genet* 10, 477-84.
- (2) Yamaguchi, S. et al. (2004) *Biochem Biophys Res Commun* 325, 250-6.
- (3) Ueda, K. et al. (2005) *Eur J Endocrinol* 153, 167-76.
- (4) Inoue, H. et al. (1998) *Nat Genet* 20, 143-8.

Rabbit monoclonal antibody is produced under license (granting certain rights including those under U. S. Patents No. 5,675,063 and 7,429,487) from Epitomics, Inc.