

SignalSilence® SYVN1 siRNA I



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

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

Web ■ www.cellsignal.com

New 07/13

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

Species Cross-Reactivity: H, (Mk)

Description: SignalSilence® SYVN1 siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit SYVN1 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.

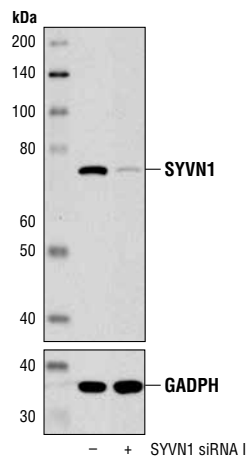
Background: Synoviolin-1 (SYVN1/HRD1) is a RING-type E3 ubiquitin-protein ligase and major component of the endoplasmic reticulum (ER) quality control system that is involved in the ubiquitin-dependent degradation of misfolded proteins (1). SYVN1 is a multispinning ER membrane protein whose expression is upregulated at the protein level under conditions that promote ER stress (1-4). Research studies have shown that SYVN1 is an anti-apoptotic factor that is implicated in the pathogenesis of arthropathy by promoting synovial hyperplasia (5). Furthermore, gene-targeting studies have demonstrated that SYVN1 expression is indispensable for embryogenesis (6).

Specificity/Sensitivity: SignalSilence® SYVN1 siRNA I inhibits human and monkey SYVN1 expression.

Directions for Use: CST recommends transfection with 100 nM SignalSilence® SYVN1 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 293T cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-) or SignalSilence® SYVN1 siRNA I (+), using SYVN1 Antibody #12925 (upper) or GAPDH (D16H11) XP® Rabbit mAb #5174 (lower). The SYVN1 Antibody confirms silencing of SYVN1 expression, while the GAPDH (D16H11) XP® Rabbit mAb is used as a loading control.

Entrez-Gene ID #84447
Swiss-Prot Acc. #Q86TM6

Storage: SYVN1 siRNA I 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) Kikkert, M. et al. (2004) *J Biol Chem* 279, 3525-34.
- (2) Kaneko, M. et al. (2007) *FEBS Lett* 581, 5355-60.
- (3) Yamamoto, K. et al. (2008) *J Biochem* 144, 477-86.
- (4) Nadav, E. et al. (2003) *Biochem Biophys Res Commun* 303, 91-7.
- (5) Amano, T. et al. (2003) *Genes Dev* 17, 2436-49.
- (6) Yagishita, N. et al. (2005) *J Biol Chem* 280, 7909-16.