

SignalSilence® TRIAD1 siRNA I



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

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

Web ■ www.cellsignal.com

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

Species Cross-Reactivity: H

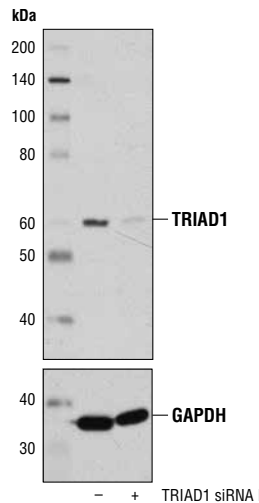
Description: SignalSilence® TRIAD1 siRNA I from Cell Signaling Technology (CST) allows the researcher to specifically inhibit TRIAD1 expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into the cell. All SignalSilence® siRNA products from CST are rigorously tested in-house and have been shown to reduce target protein expression by western analysis.

Background: The E3 ubiquitin-protein ligase ARIH2 (TRIAD1) is an Ariadne subfamily ligase involved in the polyubiquitination of proteins designated for proteasomal degradation. The TRIAD1 nuclear protein contains an amino-terminal acidic region, a pair of RING fingers, two carboxyl-terminal coiled coil domains and a novel C6HC DRIL/IBR domain located between the RING fingers. Together, the paired RING fingers and DRIL/IBR domain form a highly conserved TRIAD (two RING fingers and DRIL) domain (1). Research studies suggest that TRIAD1 mediates both Lys48 and Lys63 protein polyubiquitination and acts as a negative regulator of myelopoiesis. TRIAD1 ubiquitin ligase inhibits myeloid cell proliferation by mediating protein ubiquitination through the ubiquitin-conjugating enzymes UbcH7 and UbcH13 (2,3). Experimental deletion of TRIAD1 in mice has a lethal effect, leading to death at the embryonic stage or later due to a severe, multi-organ inflammatory response. Results indicate that TRIAD1 binds IκBβ in dendritic cells and promotes the degradation of the NF-κB inhibitor (4).

Directions for Use: CST recommends transfection with 100 nM SignalSilence® TRIAD1 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® TRIAD1 siRNA I (+), using TRIAD1 Antibody #13689 (upper) or GAPDH (D16H11) XP® Rabbit mAb #5174 (lower). The TRIAD1 Antibody confirms silencing of TRIAD1 expression, while the GAPDH (D16H11) XP® Rabbit mAb is used as a loading control.

Entrez-Gene ID #10425
Swiss-Prot Acc. #O95376

Storage: SignalSilence® TRIAD1 siRNA I is supplied in RNase-free water. Aliquot and store at -20°C.

For product specific protocols please see the web page for this product at www.cellsignal.com.

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

Background References:

- (1) van der Reijden, B.A. et al. (1999) *Protein Sci* 8, 1557-61.
- (2) Marteijn, J.A. et al. (2005) *Blood* 106, 4114-23.
- (3) Marteijn, J.A. et al. (2009) *Leukemia* 23, 1480-9.
- (4) Lin, A.E. et al. (2013) *Nat Immunol* 14, 27-33.