#13369 Store at -20°C

SignalSilence® TNF-R1 siRNA I (Mouse Specific)

Cell Signaling TECHNOLOGY®

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New 10/13

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

Species Cross-Reactivity: M

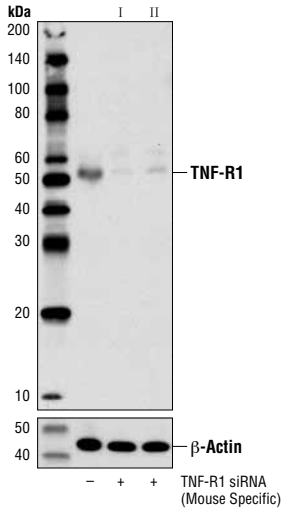
Description: SignalSilence® TNF-R1 siRNA I (Mouse Specific) from Cell Signaling Technology (CST) allows the researcher to specifically inhibit TNF-R1 expression using RNA interference, a method whereby gene expression can be selectively silenced through the delivery of double stranded RNA molecules into 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: TNF-α is an important cytokine produced by numerous cell types including neutrophils, activated lymphoctyes, macrophages and NK cells. It plays a critical role in inflammatory responses and in apoptosis (1). TNF-α exists as a membrane-anchored and soluble form, both of which show biological activity. Response to TNF-α is mediated through two receptors, TNF-R1, which is widely expressed, and TNF-R2, which is expressed mainly in immune and endothelial cells (2). Antagonists to TNF-α have been validated as therapeutic targets for rheumatoid arthritis and other immune disorders (3).

Directions for Use: CST recommends transfection with 100 nM TNF-R1 siRNA I (Mouse Specific) 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 L929 cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-), SignalSilence® TNF-R1 siRNA I (Mouse Specific) (+) or SignalSilence® TNF-R1 siRNA II (Mouse Specific) #13570 (+), using TNF-R1 (D3I7K) Rabbit mAb (Rodent Specific) #13377 (upper) or β-Actin (D6A8) Rabbit mAb #8457 (lower). The TNF-R1 (D3I7K) Rabbit mAb (Rodent Specific) confirms silencing of TNF-R1 expression, while the β-Actin (D6A8) Rabbit mAb is used as a loading control.

Entrez-Gene ID #21937
UniProt Acc. #P25118

Storage: TNF-R1 siRNA I is supplied in RNAse-free water. *Aliquot and store at -20ºC.*

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 companion products.

Background References:

(1) Aggarwal, B.B. (2003) *Nat Rev Immunol* 3, 745-56.

(2) Locksley, R.M. et al. (2001) *Cell* 104, 487-501.

(3) Taylor, P.C. et al. (2004) *Curr Opin Biotechnol* 15, 557-63.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **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.