

SignalSilence® Stat1 siRNA I

✓ 300 µl
(50–100 transfections)



Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

rev. 02/10/16

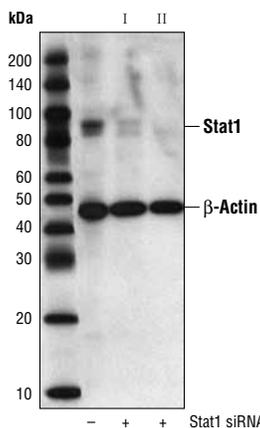
For Research Use Only. Not For Use In Diagnostic Procedures.

Species Cross-Reactivity: H

Description: SignalSilence® Stat1 siRNA allows the researcher to specifically inhibit Stat1 expression by RNA interference, a method in which 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 protein expression in specified cell lines

Background: The Stat1 transcription factor is activated in response to a large number of ligands (1) and is essential for responsiveness to IFN- α and IFN- γ (2,3). Phosphorylation of Stat1 at Tyr701 induces Stat1 dimerization, nuclear translocation and DNA binding (4). Stat1 protein exists as a pair of isoforms, Stat1 α (91 kDa) and the splice variant Stat1 β (84 kDa). In most cells, both isoforms are activated by IFN- α , but only Stat1 α is activated by IFN- γ . The inappropriate activation of Stat1 occurs in many tumors (5). In addition to tyrosine phosphorylation, Stat1 is also phosphorylated at Ser727 through a p38 mitogen-activated protein kinase (MAPK)-dependent pathway in response to IFN- α and other cellular stresses (6). Serine phosphorylation may be required for the maximal induction of Stat1-mediated gene activation.

Directions for Use: CST recommends transfection with 100 nM Stat1 siRNA. Decreased Stat1 expression was observed 24–72 hours post-transfection. For transfection procedure, follow protocol provided by the transfection reagent manufacturer. Please feel free to contact CST with any questions on use.



Western blot analysis of extracts from HeLa cells 48 hours following mock transfection, transfection with non-targeted (control) siRNA or transfection with Stat1 siRNA. Stat1 was detected using Stat1 Antibody #9172, and p42 was detected using p42 MAPK Antibody #9108. The Stat1 Antibody confirms silencing of Stat1 expression, and the p42 MAPK Antibody is used to control for protein loading and siRNA specificity.

Western blot analysis of extracts from HeLa cells, transfected with 100 nM SignalSilence® Control siRNA (Unconjugated) #6568 (-) or SignalSilence® Stat1 siRNA I or SignalSilence® Stat1 siRNA II #6544 (+), using Stat1 Antibody #9172 and β -Actin (13E5) Rabbit mAb #4970. The Stat1 Antibody confirms silencing of Stat1 expression, while the β -Actin (13E5) Rabbit mAb is used as a loading control.

Entrez-Gene ID #6772
UniProt ID #P42224

Storage: Stat1 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) Heim, M.H. (1999) *J. Recept. Signal. Transduct. Res.* 19, 75-120.
- (2) Durbin, J.E. et al. (1996) *Cell* 84, 443-450.
- (3) Meraz, M.A. et al. (1996) *Cell* 84, 431-442.
- (4) Ihle, J.N. et al. (1994) *Trends Biochem. Sci.* 19, 222-227.
- (5) Frank, D.A. (1999) *Mol. Med.* 5, 432-456.
- (6) Wen, Z. et al. (1995) *Cell* 82, 241-250.