SANTA CRUZ BIOTECHNOLOGY, INC.

# c-Fos siRNA (m): sc-29222

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*The Power to Question*

## BACKGROUND

The c-Fos oncogene was initially detected in two independent murine osteosarcoma virus isolate and an avian nephroblastoma virus. The cellular homolog, c-Fos, encodes a nuclear phospho-protein that is rapidly and transiently induced by a variety of agents and functions as a transcriptional regulator for several genes. In contrast to c-Jun proteins which form homo- and hetero-dimers which bind to specific DNA response elements, c-Fos proteins are only active as heterodimers with members of the Jun gene family. Functional homologs of c-Fos include Fra-1, Fra-2 and Fos B genes. In addition, selected ATF/CREB family members can form leucine zipper dimers with Fos and Jun. Different dimers exhibit differential specificity and affinity for AP-1 and CRE sites.

## CHROMOSOMAL LOCATION

Genetic locus: Fos (mouse) mapping to 12 D2.

## PRODUCT

c-Fos siRNA (m) is a pool of 4 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see c-Fos shRNA Plasmid (m): sc-29222-SH and c-Fos shRNA (m) Lentiviral Particles: sc-29222-V as alternate gene silencing products.

For independent verification of c-Fos (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-29222A, sc-29222B, sc-29222C and sc-29222D.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

c-Fos siRNA (m) is recommended for the inhibition of c-Fos expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

c-Fos (D-1): sc-8047 is recommended as a control antibody for monitoring of c-Fos gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor c-Fos gene expression knockdown using RT-PCR Primer: c-Fos (m)-PR: sc-29222-PR (20 µl, 421 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS


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4. Zhao, W., et al. 2011. NFκB- and AP-1-mediated DNA looping regulates osteopontin transcription in endotoxin-stimulated murine macrophages. J. Immunol. 186: 3173-3179.
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8. Wu, Y., et al. 2018. β-defensin 2 and 3 promote bacterial clearance of *Pseudomonas aeruginosa* by inhibiting macrophage autophagy through downregulation of early growth response gene-1 and c-Fos. Front. Immunol. 9: 211.
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## RESEARCH USE

For research use only, not for use in diagnostic procedures.