

Fos B siRNA (m): sc-35404

BACKGROUND

The v-Fos oncogene was initially identified as the transforming gene of two independent murine osteosarcoma virus isolates and an avian nephroblastoma virus. The cellular homolog, c-Fos, encodes a nuclear phosphoprotein 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 heterodimers which bind to specific DNA TPA response elements (TREs), c-Fos proteins are only active as heterodimers with members of the Jun gene family. Murine Fos B encodes a nuclear protein of 338 amino acids which has 70% homology with c-Fos, exhibits similar kinetics of expression as c-Fos and forms heterodimers with both c-Jun and Jun B, which bind to TRE DNA response elements. Functional homologs of c-Fos and Fos B include Fra-1 and Fra-2 genes.

REFERENCES

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3. Sambucetti, L.C. and Curran, T. 1986. The Fos protein complex is associated with DNA in isolated nuclei and binds to DNA cellulose. *Science* 234: 1417-1419.
4. Renz, M., et al. 1987. Chromatin association and DNA-binding properties of the c-Fos proto-oncogene product. *Nucleic Acids Res.* 15: 277-292.
5. Nishizawa, M., et al. 1987. An avian transforming retrovirus isolated from a nephroblastoma that carries the Fos gene as the oncogene. *J. Virol.* 61: 3733-3740.
6. Zerial, M., et al. 1989. The product of a novel growth factor activated gene, Fos B, interacts with Jun proteins enhancing their DNA binding activity. *EMBO J.* 8: 805-813.
7. Nishina, H., et al. 1990. Isolation and characterization of Fra-2, an additional member of the Fos gene family. *Proc. Natl. Acad. Sci. USA* 87: 3619-3623.
8. Castellazzi, M., et al. 1991. Overexpression of c-Jun, Jun B, or Jun D affects cell growth differently. *Proc. Natl. Acad. Sci. USA* 88: 8890-8894.

CHROMOSOMAL LOCATION

Genetic locus: Fosb (mouse) mapping to 7 A3.

PRODUCT

Fos B siRNA (m) is a pool of 3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Fos B shRNA Plasmid (m): sc-35404-SH and Fos B shRNA (m) Lentiviral Particles: sc-35404-V as alternate gene silencing products.

For independent verification of Fos B (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-35404A, sc-35404B and sc-35404C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Fos B siRNA (m) is recommended for the inhibition of Fos B 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 μ M in 66 μ l. 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

Fos B (F-7): sc-398595 is recommended as a control antibody for monitoring of Fos B 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Fos B gene expression knockdown using RT-PCR Primer: Fos B (m)-PR: sc-35404-PR (20 μ l, 554 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.