

Jun D siRNA (m): sc-35729

BACKGROUND

The activator protein-1 (AP-1) transcription factor consists of either Jun/Jun homodimers or Fos/Jun heterodimeric complexes. Homo- and heterodimers bind to the TGA/TCA consensus sequence present in numerous promoters and initially identified as the phorbol ester tumor promoter response element (TRE). Jun B and Jun D have been shown to be almost identical to c-Jun in their C-terminal regions, which are involved in dimerization and DNA binding, whereas their N-terminal domains, which are involved in transcriptional activation, diverge. All three form heterodimers among themselves and with c-Fos and other members of the Fos gene family. Studies suggest that the two forms of Jun D may be due to internal initiation of translation.

REFERENCES

- Curran, T., et al. 1988. Fos and Jun: the AP-1 connection. *Cell* 55: 395-397.
- Ryder, K., et al. 1988. Induction of proto-oncogene c-Jun by serum growth factors. *Proc. Natl. Acad. Sci. USA* 85: 8464-8467.
- Cohen, D.R., et al. 1989. The product of a Fos-related gene, Fra-1, binds cooperatively to the AP-1 site with Jun: transcription factor AP-1 is comprised of multiple protein complexes. *Genes Dev.* 3: 173-184.
- Hirai, S.I., et al. 1989. Characterization of Jun D: a new member of the Jun proto-oncogene family. *EMBO J.* 8: 1433-1439.
- Ryder, K., et al. 1989. Jun D: a third member of the Jun gene family. *Proc. Natl. Acad. Sci. USA* 86: 1500-1503.
- Vogt, P.K., et al. 1990. Jun: oncogene and transcription factor. *Adv. Cancer Res.* 55: 1-35.
- 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.
- Lallemand, D., et al. 1997. Variations in Jun and Fos protein expression and AP-1 activity in cycling, resting and stimulated fibroblasts. *Oncogene* 14: 819-830.
- Weitzman, J.B., et al. 2000. Jun D protects cells from p53-dependent senescence and apoptosis. *Mol. Cell* 6: 1109-1119.

CHROMOSOMAL LOCATION

Genetic locus: Jund (mouse) mapping to 8 B3.3.

PRODUCT

Jun D 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 Jun D shRNA Plasmid (m): sc-35729-SH and Jun D shRNA (m) Lentiviral Particles: sc-35729-V as alternate gene silencing products.

For independent verification of Jun D (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-35729A, sc-35729B and sc-35729C.

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

Jun D siRNA (m) is recommended for the inhibition of Jun D 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

Jun D (D-9): sc-271938 is recommended as a control antibody for monitoring of Jun D 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 Jun D gene expression knockdown using RT-PCR Primer: Jun D (m)-PR: sc-35729-PR (20 μ l, 502 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.