

# Produktinformation



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#### SANTA CRUZ BIOTECHNOLOGY, INC.

## c-Fos shRNA (h2) Lentiviral Particles: sc-44200-V



#### BACKGROUND

The c-Fos oncogene was initially detected in two independent murine osteo-sarcoma virus isolate and an avian nephroblastoma virus. The cellular homo-log, 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 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.

#### REFERENCES

- 1. Finkel, M.P., et al. 1966. Virus induction of osteosarcomas in mice. Science 151: 698-701.
- 2. Sambucetti, L.C., et al. 1986. The Fos protein complex is associated with DNA in isolated nuclei and binds to DNA cellulose. Science 234: 1417-1419.
- 3. 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.
- 4. Bohmann, D., et al. 1987. Human proto-oncogene c-Jun encodes a DNA binding protein with structural and functional properties of transcription factor AP-1. Science 238: 1386-1392.
- 5. Renz, M., et al. 1987. Chromatin association and DNA-binding properties of the c-Fos proto-oncogene product. Nucleic Acids Res. 15: 277-292.
- 6. 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.

#### **CHROMOSOMAL LOCATION**

Genetic locus: FOS (human) mapping to 14q24.3.

#### PRODUCT

c-Fos shRNA (h2) Lentiviral Particles is a pool of concentrated, transductionready viral particles containing 2 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200  $\mu$ l frozen stock containing 1.0 x 10<sup>6</sup> infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see c-Fos siRNA (h2): sc-44200 and c-Fos shRNA Plasmid (h2): sc-44200-SH as alternate gene silencing products.

#### **RESEARCH USE**

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

#### **APPLICATIONS**

c-Fos shRNA (h2) Lentiviral Particles is recommended for the inhibition of c-Fos expression in human cells.

#### SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x 10<sup>6</sup> infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

#### GENE EXPRESSION MONITORING

c-Fos (4): sc-52 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).

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat antirabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

#### **RT-PCR REAGENTS**

Semi-quantitative RT-PCR may be performed to monitor c-Fos gene expression knockdown using RT-PCR Primer: c-Fos (h2)-PR: sc-44200-PR (20 µl, 575 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

#### **BIOSAFETY**

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

#### **STORAGE**

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

#### **PROTOCOLS**

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