SANTA CRUZ BIOTECHNOLOGY, INC.

p53CSV siRNA (h): sc-95976

BACKGROUND

p53CSV (p53-inducible cell-survival factor), also known as WF-1, HSPC132 or TRIAP1 (TP53 regulated inhibitor of apoptosis 1), is a 76 amino acid protein that localizes to the cytoplasm and perinuclear region of cells. Belonging to the TRIAP1/MDM35 family, p53CSV mediates cell survival by inhibiting activation of caspase-9 which prevents induction of apoptosis. p53CSV is induced significantly when cells have a low level of genotoxic stresses, but not when DNA damage is severe. Interaction between p53CSV and HSP 70 may result in modulation of the apoptotic pathway and inhibition of Apaf-1 (apoptosis protease activating factor-1) activity. Regulated by p53, p53CSV plays an important role in p53-mediated cell survival. The gene encoding p53CSV maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

1. Plaja, A., et al. 2004. Intranuclear arrangement of human chromosome 12 is reflected in metaphase chromosomes as non-random bending. Ann. Genet. 47: 429-432.
2. Staib, F., et al. 2005. The p53 tumor suppressor network is a key responder to microenvironmental components of chronic inflammatory stress. Cancer Res. 65: 10255-10264.
3. Park, W.R. and Nakamura, Y. 2005. p53CSV, a novel p53-inducible gene involved in the p53-dependent cell-survival pathway. Cancer Res. 65: 1197-1206.
4. Scherer, S.E., et al. 2006. The finished DNA sequence of human chromosome 12. Nature 440: 346-351.
5. Kyuno, J., et al. 2008. A functional screen for genes involved in *Xenopus* pronephros development. Mech. Dev. 125: 571-586.
6. Yu, K., et al. 2008. A precisely regulated gene expression cassette potently modulates metastasis and survival in multiple solid cancers. PLoS Genet. 4: e1000129.
7. Felix, R.S., et al. 2009. SAGE analysis highlights the importance of p53CSV, DDX5, mapkapk2 and ranbp2 to multiple myeloma tumorigenesis. Cancer Lett. 278: 41-48.

CHROMOSOMAL LOCATION

Genetic locus: TRIAP1 (human) mapping to 12q24.31.

PRODUCT

p53CSV siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see p53CSV shRNA Plasmid (h): sc-95976-SH and p53CSV shRNA (h) Lentiviral Particles: sc-95976-V as alternate gene silencing products.

For independent verification of p53CSV (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-95976A, sc-95976B and sc-95976C.

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

p53CSV siRNA (h) is recommended for the inhibition of p53CSV expression in human 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

p53CSV (B-12): sc-515801 is recommended as a control antibody for monitoring of p53CSV 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 p53CSV gene expression knockdown using RT-PCR Primer: p53CSV (h)-PR: sc-95976-PR (20 µl, 465 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.