

p63 siRNA (m): sc-36162

BACKGROUND

The p53 gene is a widely studied anti-oncogene, or tumor suppressor gene. The p53 gene product can act as a negative regulator of cell growth in response to DNA damage. p73 shares a high degree of homology with p53, and appears to have similar growth inhibiting and apoptosis-promoting functions. However, unlike p53, the expression of p73 is not upregulated in response to DNA damage. p73 can, when overproduced, activate the p53-responsive gene p21. p63 has also been identified based on its similarities with p53. The p63 gene encodes multiple isoforms with variable functions. p63 α (also designated p51B or KET), p63 β and p63 γ (also designated p51A), as well as corresponding TA-p63 isoforms, contain transactivation domains which have been shown to transactivate p53 reporter genes and induce apoptosis. DNp63 isoforms lack the *trans*-activation domain and can act as dominant-negative reagents to inhibit *trans*-activation by p53 and p63.

REFERENCES

1. Lane, D.P., et al. 1990. p53: oncogene or anti-oncogene? *Genes Dev.* 4: 1-8.
2. Kastan, M.B., et al. 1992. A mammalian cell cycle checkpoint pathway utilizing p53 and GADD45 is defective in ataxia-telangiectasia. *Cell* 71: 587-597.
3. Zhu, J., et al. 1998. The potential tumor suppressor p73 differentially regulates cellular p53 target genes. *Cancer Res.* 58: 5061-5065.
4. De Laurenzi, V., et al. 1998. Two new splice variants, γ and δ , with different transcriptional activity. *J. Exp. Med.* 188: 1763-1768.
5. Yang, A., et al. 1998. p63, a p53 homolog at 3q27-29, encodes multiple products with transactivating, death-inducing, and dominant-negative activities. *Mol. Cell* 2: 305-316.

CHROMOSOMAL LOCATION

Genetic locus: Trp63 (mouse) mapping to 16 B1.

PRODUCT

p63 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 p63 shRNA Plasmid (m): sc-36162-SH and p63 shRNA (m) Lentiviral Particles: sc-36162-V as alternate gene silencing products.

For independent verification of p63 (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-36162A, sc-36162B and sc-36162C.

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.

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

p63 siRNA (m) is recommended for the inhibition of p63 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

p63 (D-9): sc-25268 is recommended as a control antibody for monitoring of p36 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 p63 gene expression knockdown using RT-PCR Primer: p63 (m)-PR: sc-36162-PR (20 μ l, 587 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.