SANTA CRUZ BIOTECHNOLOGY, INC.

TA* p63β siRNA (h): sc-37479

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 isotypes with variable functions. p63α (also designated p51B or KET), p63β and p63γ (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. ΔN p63 isoforms lack the transactivation domain and can act as dominant-negative reagents to inhibit transactivation 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: TP73L (human) mapping to 3q28; Trp63 (mouse) mapping to 16 B1.

PRODUCT

TA* p63β siRNA (h) a target-specific 20-25 nt siRNA designed to knock down gene expression. Each vial contains 3 nmoles of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections.

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.

RESEARCH USE

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

APPLICATIONS

TA* p63β siRNA (h) is recommended for the inhibition of TA * p63β expression in human cells.

TA* p63 (D-20): sc-8608 is recommended as a control antibody for Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) protein detection using the recommended secondary reagents listed below.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 siRNA (Fluorescein Conjugate): sc-36869 (10 µM in 60 µl) or Control siRNA: sc-37007 (10 µM in 60 µl) are also available. Semi-quantitative RT-PCR may be performed using RT-PCR Primer: TA* p63β (h)-PR: sc-37479-PR (20 µl, ***** bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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