SANTA CRUZ BIOTECHNOLOGY, INC.

Wig-1 siRNA (h): sc-106883

BACKGROUND

p53 is a DNA-binding protein that is involved in a variety of processes, including tumor suppression and apoptosis, DNA replication and repair, and cell cycle regulation. Normal cells and tissues express a low level of p53 under most circumstances, but p53 expression is induced by DNA damage and cellular stress. Wig-1 (wild type p53-induced gene 1) is a zinc finger protein that contains a putative nuclear localization signal (NLS) and is induced by p53. Wig-1 expression is increased by whole body γ irradiation in these tissues as well as in spleen and lung.

REFERENCES

1. Trepel, M., Scheding, S., Groscurth, P., Horny, H.P., Malipiero, U., Brugger, W., Dichgans, J. and Weller, M. 1997. A new look at the role of p53 in leukemia cell sensitivity to chemotherapy. Leukemia 11: 1842-1849.
2. Kagawa, S., Fujiwara, T., Hizuta, A., Yasuda, T., Zhang, W.W., Roth, J.A. and Tanaka, N. 1997. p53 expression overcomes $p21^{WAF1/CIP1}$-mediated G_1 arrest and induces apoptosis in human cancer cells. Oncogene 15: 1903-1909.
3. Varmeh-Ziaie, S., Okan, I., Wang, Y., Magnusson, K.P., Warthoe, P., Strauss, M. and Wiman, K.G. 1997. Wig-1, a new p53-induced gene encoding a zinc finger protein. Oncogene 15: 2699-2704.
4. Evan, G. and Littlewood, T. 1998. A matter of life and cell death. Science 281: 1317-1322.
5. Kubbutat, M.H. and Vousden, K.H. 1998. Keeping an old friend under control: regulation of p53 stability. Mol. Med. Today 4: 250-256.

CHROMOSOMAL LOCATION

Genetic locus: ZMAT3 (human) mapping to 3q26.32.

PRODUCT

Wig-1 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 Wig-1 shRNA Plasmid (h): sc-106883-SH and Wig-1 shRNA (h) Lentiviral Particles: sc-106883-V as alternate gene silencing products.

For independent verification of Wig-1 (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-106883A, sc-106883B and sc-106883C.

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

Wig-1 siRNA (h) is recommended for the inhibition of Wig-1 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

Wig-1 (C-1): sc-398712 is recommended as a control antibody for monitoring of Wig-1 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 Wig-1 gene expression knockdown using RT-PCR Primer: Wig-1 (h)-PR: sc-106883-PR (20 µl). 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.