SANTA CRUZ BIOTECHNOLOGY, INC.

Morc3 siRNA (h): sc-91533

BACKGROUND

The Microrchidia (Morc) family of proteins includes four predicted members in human (Morc1, Morc2, Morc3 and Morc4) and five in mice (Morc1, Morc2a, Morc2b, Morc3 and Morc4). MORC family CW-type zinc finger protein 3 (Morc3), also known as zinc finger CW-type coiled-coil domain protein 3 (ZCWCC3), is a 939 amino acid protein belonging to the MORC family. Ubiquitously expressed in human cell lines, Morc3 contains one CW-type zinc finger and is localized to the nuclear matrix. Morc3 has been shown to play a role in recruiting p53 and SP-100 to promyelocytic leukemia (PML)-nuclear bodies (NBs). Furthermore, Morc3 regulates p53 activation in a manner dependent on Morc3-ATPase activity.

REFERENCES

1. Nagase, T., Seki, N., Tanaka, A., Ishikawa, K. and Nomura, N. 1995. Prediction of the coding sequences of unidentified human genes. IV. The coding sequences of 40 new genes (KIAA0121-KIAA0160) deduced by analysis of cDNA clones from human cell line KG-1. DNA Res. 2: 167-174, 199.
2. Inoue, N., Hess, K.D., Moreadith, R.W., Richardson, L.L., Handel, M.A., Watson, M.L. and Zinn, A.R. 1999. New gene family defined by MORC, a nuclear protein required for mouse spermatogenesis. Hum. Mol. Genet. 8: 1201-1207.
3. Inoue, N., Wei, F., Seldin, M.F., Zinn, A.R. and Watson, M.L. 2000. Assignment of microrchidia (Morc) to mouse chromosome 16 by interspecific backcross linkage analysis and human chromosome 3q13 using somatic cell hybrids and *in situ* hybridization. Cytogenet. Cell Genet. 90: 123-125.
4. Kimura, Y., Sakai, F., Nakano, O., Kisaki, O., Sugimoto, H., Sawamura, T., Sadano, H. and Osumi, T. 2002. The newly identified human nuclear protein NXP-2 possesses three distinct domains, the nuclear matrix-binding, RNA-binding, and coiled-coil domains. J. Biol. Chem. 277: 20611-20617.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610078. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: MORC3 (human) mapping to 21q22.12.

PRODUCT

Morc3 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 Morc3 shRNA Plasmid (h): sc-91533-SH and Morc3 shRNA (h) Lentiviral Particles: sc-91533-V as alternate gene silencing products.

For independent verification of Morc3 (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-91533A, sc-91533B and sc-91533C.

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

Morc3 siRNA (h) is recommended for the inhibition of Morc3 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

Morc3 (G-12): sc-514672 is recommended as a control antibody for monitoring of Morc3 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 Morc3 gene expression knockdown using RT-PCR Primer: Morc3 (h)-PR: sc-91533-PR (20 µl, 336 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.