SANTA CRUZ BIOTECHNOLOGY, INC.

nm23-H6 siRNA (h): sc-75933

BACKGROUND

nm23-H6, also known as NME6 (nucleoside diphosphate kinase 6), is a 186 amino acid protein that localizes to the mitochondrion and belongs to the NDK family of kinases. Expressed ubiquitously with highest expression in ovary, kidney, spleen, prostate and intestine, nm23-H6 uses magnesium as a cofactor to catalyze the ATP-dependent creation of nucleoside triphosphates and, via this catalytic activity, is thought to be involved in cell growth, cell cycle progression and apoptotic control. The gene encoding nm23-H6 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

REFERENCES

1. Postel, E.H. 1998. NM23-NDP kinase. Int. J. Biochem. Cell Biol. 30: 1291-1295.
2. Mehus, J.G., et al. 1999. NME6: a new member of the nm23/nucleoside diphosphate kinase gene family located on human chromosome 3p21.3. Hum. Genet. 104: 454-459.
3. Tsuiki, H., et al. 1999. A novel human nucleoside diphosphate (NDP) kinase, Nm23-H6, localizes in mitochondria and affects cytokinesis. J. Cell. Biochem. 76: 254-269.
4. Lacombe, M.L., et al. 2000. The human Nm23/nucleoside diphosphate kinases. J. Bioenerg. Biomembr. 32: 247-258.
5. Kimura, N., et al. 2000. Regulation of cellular functions by nucleoside diphosphate kinases in mammals. J. Bioenerg. Biomembr. 32: 309-315.
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CHROMOSOMAL LOCATION

Genetic locus: NME6 (human) mapping to 3p21.31.

PRODUCT

nm23-H6 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 nm23-H6 shRNA Plasmid (h): sc-75933-SH and nm23-H6 shRNA (h) Lentiviral Particles: sc-75933-V as alternate gene silencing products.

For independent verification of nm23-H6 (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-75933A, sc-75933B and sc-75933C.

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 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

nm23-H6 siRNA (h) is recommended for the inhibition of nm23-H6 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor nm23-H6 gene expression knockdown using RT-PCR Primer: nm23-H6 (h)-PR: sc-75933-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.