SANTA CRUZ BIOTECHNOLOGY, INC.

NYD-SP15 siRNA (h): sc-75986

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The Power to Question

BACKGROUND

NYD-SP15 (testis development protein NYD-SP15), also known as CDADC1 (cytidine and dCMP deaminase domain containing 1), is a widely expressed protein with predominant expression in the testis, liver, spleen, kidney, thymus and placenta. NYD-SP15 is 514 amino acids in length and belongs to the cytidine and deoxycytidylate deaminase family. It is developmentally regulated with higher expression in adult testis than fetal testis and is believed to participate in spermatogenesis and testicular development. This suggests that NYD-SP15 may be a determining factor in male infertility. Due to alternative splicing events, four transcript variants exist for NYD-SP15.

REFERENCES

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2. Toshimitsu, H., Iizuka, N., Yamamoto, K., Kawauchi, S., Oga, A., Furuya, T., Oka, M. and Sasaki, K. 2006. Molecular features linked to the growth-inhibitory effects of gemcitabine on human pancreatic cancer cells. Oncol. Rep. 16: 1285-1291.
3. Liu, Q., Liu, J., Cao, Q., Sha, J., Zhou, Z., Wang, H. and Li, J. 2006. NYD-SP15: a novel gene potentially involved in regulating testicular development and spermatogenesis. Biochem. Genet. 44: 409-423.
4. Kumagai, T., Tomari, K., Shimizu, T. and Takeda, K. 2006. Alteration of gene expression in response to bone morphogenetic protein-2 in androgen-dependent human prostate cancer LNCaP cells. Int. J. Mol. Med. 17: 285-291.

CHROMOSOMAL LOCATION

Genetic locus: CDADC1 (human) mapping to 13q14.2.

PRODUCT

NYD-SP15 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 NYD-SP15 shRNA Plasmid (h): sc-75986-SH and NYD-SP15 shRNA (h) Lentiviral Particles: sc-75986-V as alternate gene silencing products.

For independent verification of NYD-SP15 (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-75986A, sc-75986B and sc-75986C.

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

NYD-SP15 siRNA (h) is recommended for the inhibition of NYD-SP15 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

NYD-SP15 (3C8): sc-81998 is recommended as a control antibody for monitoring of NYD-SP15 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 NYD-SP15 gene expression knockdown using RT-PCR Primer: NYD-SP15 (h)-PR: sc-75986-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.