SANTA CRUZ BIOTECHNOLOGY, INC.

N4BP3 siRNA (m): sc-149780

BACKGROUND

N4BP3 (NEDD4 binding protein 3) is 544 amino acid peripheral membrane protein that binds to NEDD4. NEDD4 is an ubiquitin acceptor that transports ubiquitin from E2 ligase enzymes to various substrates throughout the body, helping to regulate degradation of plasma membrane. The gene encoding N4BP3 maps to chromosome 5 which contains 181 million base pairs and comprises nearly 6% of the human genome. Chromosome 5 is associated with Cockayne syndrome through the ERCC8 gene and familial adenomatous polyposis through the adenomatous polyposis coli (APC) tumor suppressor gene. Treacher Collins syndrome is also chromosome 5-associated and is caused by insertions or deletions within the TCOF1 gene. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

1. Dixon, M.J., et al. 1991. The gene for Treacher Collins syndrome maps to the long arm of chromosome 5. Am. J. Hum. Genet. 49: 17-22.
2. Saltman, D.L., et al. 1993. A physical map of 15 loci on human chromosome 5q23-q33 by two-color fluorescence *in situ* hybridization. Genomics 16: 726-732.
3. Murillas, R., et al. 2002. Identification of developmentally expressed proteins that functionally interact with NEDD4 ubiquitin ligase. J. Biol. Chem. 277: 2897-2907.
4. Shearwin-Whyatt, L., et al. 2006. Regulation of functional diversity within the NEDD4 family by accessory and adaptor proteins. Bioessays 28: 617-628.
5. South, S.T., et al. 2006. A new genomic mechanism leading to cri-du-chat syndrome. Am. J. Med. Genet. A 140: 2714-2720.
6. Cleaver, J.E., et al. 2007. Cockayne syndrome exhibits dysregulation of p21 and other gene products that may be independent of transcription-coupled repair. Neuroscience 145: 1300-1308.

CHROMOSOMAL LOCATION

Genetic locus: C330016O10Rik (mouse) mapping to 11 B1.3.

PRODUCT

N4BP3 siRNA (m) 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 N4BP3 shRNA Plasmid (m): sc-149780-SH and N4BP3 shRNA (m) Lentiviral Particles: sc-149780-V as alternate gene silencing products.

For independent verification of N4BP3 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-149780A, sc-149780B and sc-149780C.

RESEARCH USE

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

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

N4BP3 siRNA (m) is recommended for the inhibition of N4BP3 expression in mouse 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 N4BP3 gene expression knockdown using RT-PCR Primer: N4BP3 (m)-PR: sc-149780-PR (20 µl). 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.