SANTA CRUZ BIOTECHNOLOGY, INC.

FMR1NB siRNA (h): sc-90974

BACKGROUND

FMR1NB (fragile X mental retardation 1 neighbor), also referred to as CT37 (cancer/testis antigen 37), NYSAR35 or NY-SAR-35, is a 255 amino acid multi-pass membrane protein that is expressed in melanoma, sarcoma, lung, breast, bladder, esophageal and ovarian cancers. FMR1NB contains one P-type (trefoil) domain. The P-type (trefoil) motif is a three-looped clover leaf domain consisting of approximately 38 amino acids in length in which the loops are held together by six highly conserved disulfide bonds. P-type (trefoil) domains are commonly associated with both diseased and normal mucus-secreting epithelia. FMR1NB is encoded by a gene located on human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes. In conjunction with chromosome Y, chromosome X is responsible for sex determination. There are a number of conditions related to an abnormal number and combination of sex chromosomes, some of which include Turner's syndrome, color blindness, hemophilia and Duchenne muscular dystrophy.

REFERENCES

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4. Bernardino-Sgherri, J., Flagiello, D. and Dutrillaux, B. 2002. Overall DNA methylation and chromatin structure of normal and abnormal X chromosomes. Cytogenet. Genome Res. 99: 85-91.
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CHROMOSOMAL LOCATION

Genetic locus: FMR1NB (human) mapping to Xq27.3.

PRODUCT

FMR1NB 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 FMR1NB shRNA Plasmid (h): sc-90974-SH and FMR1NB shRNA (h) Lentiviral Particles: sc-90974-V as alternate gene silencing products.

For independent verification of FMR1NB (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-90974A, sc-90974B and sc-90974C.

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

FMR1NB siRNA (h) is recommended for the inhibition of FMR1NB 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 FMR1NB gene expression knockdown using RT-PCR Primer: FMR1NB (h)-PR: sc-90974-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.