SANTA CRUZ BIOTECHNOLOGY, INC.

CENPQ siRNA (m): sc-142271

BACKGROUND

CENPQ, also known as centromere protein Q, is a 268 amino acid protein that is part of the CENPA-CAD complex. This complex is recruited to centromeres and aids in the assembly of kinetochore proteins, as well as the progression of mitosis and segregation of chromosomes. Through the interaction with CENPA-CAD, CENPQ may also incorporate CENPA into centromeres. The CENPA-CAD complex is likely recruited to centromeres by the CENPA-NAC complex. CENPQ is post-translationally phosphorylated at serine 31 and 50. The gene encoding CENPQ maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Cenpq (mouse) mapping to 17 B2.

PRODUCT

CENPQ 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 CENPQ shRNA Plasmid (m): sc-142271-SH and CENPQ shRNA (m) Lentiviral Particles: sc-142271-V as alternate gene silencing products.

For independent verification of CENPQ (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-142271A, sc-142271B and sc-142271C.

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

CENPQ siRNA (m) is recommended for the inhibition of CENPQ 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 CENPQ gene expression knockdown using RT-PCR Primer: CENPQ (m)-PR: sc-142271-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.