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Pericentrin 1 siRNA (m): sc-152168

BACKGROUND

Pericentrin 1 (nuclear pore complex protein Nup85) is a 656 amino acid member of the nucleoporin Nup85 family. Pericentrin 1 is an essential component of the nuclear pore complex (NPC) and is likely required for NPC assembly and maintenance. Bidirectional transport of macromolecules between the cytoplasm and nucleus occurs through NPCs embedded in the nuclear envelope. The Pericentrin 1 containing NPC subcomplex, Nup107-160, works to organize RNA export and in tethering NUP98/Nup98 and NUP153 to the nucleus. The Nup107-160 complex is likely required for spindle assembly during mitosis and for membrane clustering of CCL2-activated CCR2. Pericentrin 1 also acts as a regulator of microtubule nucleation by associating with γ-Tubulin and anchors the PKA holoenzyme at the association site. The gene encoding human Pericentrin 1 is found at chromosome 17q25.2.

REFERENCES

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5. Orjalo, A.V., et al. 2006. The Nup107-160 nucleoporin complex is required for correct bipolar spindle assembly. Mol. Biol. Cell 17: 3806-3818.

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7. Gauci, S., et al. 2009. Lys-N and trypsin cover complementary parts of the phosphoproteome in a refined SCX-based approach. Anal. Chem. 81: 4493-4501.

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CHROMOSOMAL LOCATION

Genetic locus: Nup85 (mouse) mapping to 11 E2.

PRODUCT

Pericentrin 1 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 Pericentrin 1 shRNA Plasmid (m): sc-152168-SH and Pericentrin 1 shRNA (m) Lentiviral Particles: sc-152168-V as alternate gene silencing products.

For independent verification of Pericentrin 1 (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-152168A, sc-152168B and sc-152168C.

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

Pericentrin 1 siRNA (m) is recommended for the inhibition of Pericentrin 1 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.

GENE EXPRESSION MONITORING

Pericentrin 1 (D-4): sc-376111 is recommended as a control antibody for monitoring of Pericentrin 1 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 Pericentrin 1 gene expression knockdown using RT-PCR Primer: Pericentrin 1 (m)-PR: sc-152168-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.