SANTA CRUZ BIOTECHNOLOGY, INC.

POM121 siRNA (h): sc-89532

BACKGROUND

POM121 (POM121 membrane glycoprotein), also known as POM121A (nuclear envelope pore membrane protein POM 121A), NUP121 (nucleoporin Nup121) or pore membrane protein of 121 kDa, is a 1,249 amino acid single-pass membrane protein that exists as three alternatively spiced isoforms and belongs to the POM121 family. Encoded by a gene that maps to human chromosome 7q11.23, POM121 is highly conserved and localizes to nucleus membrane and endoplasmic reticulum membrane. An essential component of the nuclear pore complex (NPC), POM121 is mandatory for nuclear envelope formation and may play a role in biogenesis of the NPC. POM121 associates with the central spoke ring complex and is involved in anchoring components of the pore complex to the pore membrane by way of its F-X-F-G repeat-containing domain. POM121 overexpression induces the formation of cytoplasmic annulate lamellae (AL).

REFERENCES

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3. Imreh, G., et al. 2003. ER retention may play a role in sorting of the nuclear pore membrane protein POM121. Exp. Cell Res. 284: 173-184.
4. Antonin, W., et al. 2005. The integral membrane nucleoporin POM121 functionally links nuclear pore complex assembly and nuclear envelope formation. Mol. Cell 17: 83-92.
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7. Rasala, B.A., et al. 2008. Capture of AT-rich chromatin by ELYS recruits POM121 and NDC1 to initiate nuclear pore assembly. Mol. Biol. Cell 19: 3982-3996.
8. Yavuz, S., et al. 2010. NLS-mediated NPC functions of the nucleoporin Pom121. FEBS Lett. 584: 3292-3298.
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CHROMOSOMAL LOCATION

Genetic locus: POM121 (human) mapping to 7q11.23.

PRODUCT

POM121 siRNA (h) is a target-specific 19-25 nt siRNA 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 POM121 shRNA Plasmid (h): sc-89532-SH and POM121 shRNA (h) Lentiviral Particles: sc-89532-V as alternate gene silencing products.

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

POM121 siRNA (h) is recommended for the inhibition of POM121 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 POM121 gene expression knockdown using RT-PCR Primer: POM121 (h)-PR: sc-89532-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.