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periphilin 1 siRNA (m): sc-152169

BACKGROUND

Periphilin 1, also known as PPHLN1 or gastric cancer antigen Ga50, is a 458 amino acid protein that interacts with periplakin, a known precursor of the cornified cell envelope. A homodimer, periphilin 1 is involved in epithelial differentiation and contributes to epidermal integrity and barrier formation. Periphilin 1 is ubiquitously expressed and localizes to nucleus and cytoplasm. Existing as eight alternatively spliced isoforms, periphilin 1 is highly insoluble and contains a putative nuclear localization signal (NLS) within its N-terminal half, a prerequisite for the formation of insoluble complexes. The N-terminal portion of periphilin 1 is followed by a possible caspase recognition sequence and the C-terminal half contains a potential nuclear export signal, which is composed of heptad repeats that form four putative α helices, and shares structural homology with the homodimerization domain of vitellogenin proteins. Periphilin 1 is encoded by a gene that maps to human chromosome 12q12.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Pphln1 (mouse) mapping to 15 E3.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

Periphilin 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see periphilin 1 shRNA Plasmid (m): sc-152169-SH and periphilin 1 shRNA (m) Lentiviral Particles: sc-152169-V as alternate gene silencing products.

For independent verification of periphilin 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-152169A, sc-152169B and sc-152169C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Periphilin 1 siRNA (m) is recommended for the inhibition of periphilin 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 μ M in 66 μ l. 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 periphilin 1 gene expression knockdown using RT-PCR Primer: periphilin 1 (m)-PR: sc-152169-PR (20 μ l). 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.