

PAWP siRNA (h): sc-76073

BACKGROUND

PAWP (postacrosomal sheath WW domain-binding protein), also known as WW domain-binding protein 2-like, is a 309 amino acid protein that resides in the postacrosomal sheath of the sperm perinuclear theca. During fertilization, PAWP may play a significant role in meiotic resumption and pronuclear formation. The N-terminus of PAWP shares significant sequence similarity with WW domain-binding protein 2 and the C-terminus is proline-rich, suggesting that this region may serve to bind other proteins. PAWP contains a GRAM domain, which is found in a variety of proteins that are associated with signal transduction and membrane-coupled processes. Introduction of recombinant PAWP into metaphase II-arrested oocytes induces a high rate of pronuclear formation, an event which appears to be dependent on the PPXY motif of sperm-contributed PAWP.

REFERENCES

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6. Wu, A.T., Sutovsky, P., Xu, W., van der Spoel, A.C., Platt, F.M. and Oko, R. 2007. The postacrosomal assembly of sperm head protein, PAWP, is independent of acrosome formation and dependent on microtubular manchette transport. *Dev. Biol.* 312: 471-483.

CHROMOSOMAL LOCATION

Genetic locus: WBP2NL (human) mapping to 22q13.2.

PRODUCT

PAWP 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PAWP shRNA Plasmid (h): sc-76073-SH and PAWP shRNA (h) Lentiviral Particles: sc-76073-V as alternate gene silencing products.

For independent verification of PAWP (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-76073A, sc-76073B and sc-76073C.

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

PAWP siRNA (h) is recommended for the inhibition of PAWP 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 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 PAWP gene expression knockdown using RT-PCR Primer: PAWP (h)-PR: sc-76073-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.

PROTOCOLS

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