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# PWP1 siRNA (m): sc-152597

## BACKGROUND

PWP1 (Periodic tryptophan protein 1), also known as IEF SSP 9502 or endonuclein, is a 501 amino acid protein that is the human homolog of the *Saccharomyces cerevisiae* periodic Trp protein. Localized to the nucleus and expressed highly in the kidneys, pancreas, placenta and skeletal muscle, PWP1 is thought to play an important role in transcription and cell growth. In yeast, PWP1 is a histone tail-associated protein that interacts with chromatin through the H4 tail. PWP1 contains five WD-repeats and may participate in the development of pancreatic cancer. It is implicated in regulating chaperone activities in the ER and signal transduction pathways in the nucleus.

## REFERENCES

1. Duronio, R.J., et al. 1992. Comparative analysis of the  $\beta$  transducin family with identification of several new members including PWP1, a nonessential gene of *Saccharomyces cerevisiae* that is divergently transcribed from NMT1. *Proteins* 13: 41-56.
2. Honore, B., et al. 1995. Cloning of a cDNA encoding a novel human nuclear phosphoprotein belonging to the WD-40 family. *Gene* 151: 291-296.
3. Honore, B., et al. 2002. Endonuclein is a cell cycle regulated WD-repeat protein that is up-regulated in adenocarcinoma of the pancreas. *Oncogene* 21: 1123-1129.
4. Zhang, W., et al. 2005. The functional landscape of mouse gene expression. *J. Biol.* 3: 21.
5. Suka, N., et al. 2006. The WD40-repeat protein Pwp1p associates *in vivo* with 25S ribosomal chromatin in a histone H4 tail-dependent manner. *Nucleic Acids Res.* 34: 3555-3567.
6. Yuan, X., et al. 2007. Nuclear protein profiling of Jurkat cells during heat stress-induced apoptosis by 2-DE and MS/MS. *Electrophoresis* 28: 2018-2026.

## CHROMOSOMAL LOCATION

Genetic locus: Pwp1 (mouse) mapping to 10 C1.

## PRODUCT

PWP1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PWP1 shRNA Plasmid (m): sc-152597-SH and PWP1 shRNA (m) Lentiviral Particles: sc-152597-V as alternate gene silencing products.

For independent verification of PWP1 (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-152597A, sc-152597B and sc-152597C.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

PWP1 siRNA (m) is recommended for the inhibition of PWP1 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  $\mu$ M in 66  $\mu$ 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.

## GENE EXPRESSION MONITORING

PWP1 (B-2): sc-166656 is recommended as a control antibody for monitoring of PWP1 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-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 PWP1 gene expression knockdown using RT-PCR Primer: PWP1 (m)-PR: sc-152597-PR (20  $\mu$ 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.