

# palladin siRNA (h): sc-88986

## BACKGROUND

Palladin, also known as PALLD, PNCA1 or SIH002, is a 1,383 amino acid protein that localizes to both the cytoplasm and the cytoskeleton and contains five immunoglobulin (Ig)-like domains. Expressed as several alternatively spliced isoforms that are found in kidney, prostate, ovary and colon, palladin functions as a cytoskeletal protein that is required both for the organization of the Actin cytoskeleton, as well as for the establishment of proper cell motility, cell adhesion and cell-matrix interactions. Palladin interacts with Eps8, LASP-1 and VASP and may also play a role in cytoskeletal scaffolding and Actin remodeling. In response to DNA damage, palladin is subject to phosphorylation on select serine residues. Defects in the gene encoding palladin may increase genetic susceptibility to pancreatic cancer, strongly suggesting a role for palladin in tumorigenesis.

## REFERENCES

1. Parast, M.M., et al. 2000. Characterization of palladin, a novel protein localized to stress fibers and cell adhesions. *J. Cell Biol.* 150: 643-656.
2. Mykkanen, O.M., et al. 2001. Characterization of human palladin, a micro-filament-associated protein. *Mol. Biol. Cell* 12: 3060-3073.
3. Eberle, M.A., et al. 2002. A new susceptibility locus for autosomal dominant pancreatic cancer maps to chromosome 4q32-34. *Am. J. Hum. Genet.* 70: 1044-1048.
4. Moriyama, K., et al. 2002. Palladin is a component of a multi-protein complex involved in the biogenesis of lysosome-related organelles. *Traffic* 3: 666-677.

## CHROMOSOMAL LOCATION

Genetic locus: PALLD (human) mapping to 4q32.3.

## PRODUCT

palladin 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see palladin shRNA Plasmid (h): sc-88986-SH and palladin shRNA (h) Lentiviral Particles: sc-88986-V as alternate gene silencing products.

For independent verification of palladin (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-88986A, sc-88986B and sc-88986C.

## 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

palladin siRNA (h) is recommended for the inhibition of palladin 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  $\mu$ 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

palladin (G-2): sc-166563 is recommended as a control antibody for monitoring of palladin 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 palladin gene expression knockdown using RT-PCR Primer: palladin (h)-PR: sc-88986-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Morishige, N., et al. 2016. Coordinated regulation of palladin and  $\alpha$ -smooth muscle Actin by transforming growth factor- $\beta$  in human corneal fibroblasts. *Invest. Ophthalmol. Vis. Sci.* 57: 3360-3368.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.