

# PDCL3 siRNA (m): sc-152127

## BACKGROUND

PDCL3 (phosducin-like 3), also known as VIAF1 (viral IAP-associated factor 1), VIAF, PHLP3 or HTPHLP, is a widely expressed protein that belongs to the phosducin-like family of proteins. Members of this family contain a conserved C-terminus and were initially thought function as modulators of heterotrimeric G proteins that specifically bound to the  $\beta\gamma$  subunits of G proteins, thereby neutralizing the subunit and inhibiting G protein-mediated signal transduction. It is now believed that the majority of phosducin-like family members associate with the cytosolic chaperonin complex (CCT) and regulate the folding of proteins. Localizing to the cytoplasm, PDCL3 does not appear to play a role in G protein signaling, but participates in the chaperone-assisted folding of proteins, such as  $\beta$  Tubulin and Actin, that are involved in the regulation of cell cycle progression. More specifically, PDCL3, when associated with CCT, represses the ATPase activity of CCT and ultimately disrupts the folding of the Actin or tubulin substrates.

## REFERENCES

1. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 6116787. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Blaauw, M., et al. 2003. Phosducin-like proteins in *Dictyostelium discoideum*: implications for the phosducin family of proteins. EMBO J. 22: 5047-5057.
3. Wilkinson, J.C., et al. 2004. VIAF, a conserved inhibitor of apoptosis (IAP)-interacting factor that modulates caspase activation. J. Biol. Chem. 279: 51091-51099.

## CHROMOSOMAL LOCATION

Genetic locus: Pdcl3 (mouse) mapping to 1 B.

## PRODUCT

PDCL3 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 PDCL3 shRNA Plasmid (m): sc-152127-SH and PDCL3 shRNA (m) Lentiviral Particles: sc-152127-V as alternate gene silencing products.

For independent verification of PDCL3 (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-152127A, sc-152127B and sc-152127C.

## 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

PDCL3 siRNA (m) is recommended for the inhibition of PDCL3 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

PDCL3 (F-4): sc-515739 is recommended as a control antibody for monitoring of PDCL3 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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PDCL3 gene expression knockdown using RT-PCR Primer: PDCL3 (m)-PR: sc-152127-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. Srinivasan, S., et al. 2015. Hypoxia-induced expression of phosducin-like 3 regulates expression of VEGFR-2 and promotes angiogenesis. Angiogenesis 18: 449-462.

## 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.