

PDZK3 siRNA (m): sc-152147

BACKGROUND

PDZK3 (PDZ domain-containing protein 3), also known as PDZD2 (PDZ domain containing 2), AIPC (activated in prostate cancer protein), PIN1 or PAPIN (plakophilin-related armadillo repeat protein-interacting protein), is a 2,839 amino acid protein that contains six PDZ (DHR) domains and exists as two alternatively spliced isoforms. Localizing to nucleus, cytoplasm and endoplasmic reticulum, PDZK3 is ubiquitously expressed. PDZK3 is also expressed in both normal prostate and prostate tumors, and may be a potential auto-crine prostate tumor suppressor. PDZK3 interacts with Na⁺ CP type X α , δ -catenin and plakophilin 4. Overexpression of mHSF3 restores the expression of nontraditional heat-shock genes, such as PDZK3, in mouse embryonic fibroblasts. Conversely, mHSF3 down-regulation abolishes moderate expression of PDZK3 and reduces cell survival during heat shock. PDZK3 also affects the growth and differentiation of human fetal pancreatic progenitor cells. PDZK3 is encoded by a gene that maps to human chromosome 5p13.3.

REFERENCES

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2. Tam, C.W., Cheng, A.S., Ma, R.Y., Yao, K.M. and Shiu, S.Y. 2006. Inhibition of prostate cancer cell growth by human secreted PDZ domain-containing protein 2, a potential autocrine prostate tumor suppressor. *Endocrinology* 147: 5023-5033.
3. Ng, G., Winder, D., Muralidhar, B., Gooding, E., Roberts, I., Pett, M., Mukherjee, G., Huang, J. and Coleman, N. 2007. Gain and overexpression of the oncostatin M receptor occur frequently in cervical squamous cell carcinoma and are associated with adverse clinical outcome. *J. Pathol.* 212: 325-334.
4. Suen, P.M., Zou, C., Zhang, Y.A., Lau, T.K., Chan, J., Yao, K.M. and Leung, P.S. 2008. PDZ-domain containing-2 (PDZD2) is a novel factor that affects the growth and differentiation of human fetal pancreatic progenitor cells. *Int. J. Biochem. Cell Biol.* 40: 789-803.

CHROMOSOMAL LOCATION

Genetic locus: Pdzd2 (mouse) mapping to 15 A1.

PRODUCT

PDZK3 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 PDZK3 shRNA Plasmid (m): sc-152147-SH and PDZK3 shRNA (m) Lentiviral Particles: sc-152147-V as alternate gene silencing products.

For independent verification of PDZK3 (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-152147A, sc-152147B and sc-152147C.

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

PDZK3 siRNA (m) is recommended for the inhibition of PDZK3 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 PDZK3 gene expression knockdown using RT-PCR Primer: PDZK3 (m)-PR: sc-152147-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.