SANTA CRUZ BIOTECHNOLOGY, INC.

pescadillo siRNA (h): sc-61328

BACKGROUND

The deduced 588 amino acid pescadillo protein (also designated PES1) is the human homolog of zebrafish pescadillo and shows 74% sequence identity to the zebrafish sequence. During the first three days of zebrafish development, pescadillo is highly expressed, but no expression is observed in any adult tissue except the ovary. The mouse pescadillo sequence contains a BRCT (breast cancer C-terminal) domain, originally identified in BRCA1, a p53-binding protein. In mouse tissue, pescadillo is ubiquitiously expressed with highest levels of expression in adult and fetal liver, followed by adult kidney and testis; the lowest expression is found in skeletal muscle. Pescadillo upregulation occurs in human breast carcinoma cells and in primary glioblastoma cells. Proliferation only occurs in HeLa cells that express pescadillo.

REFERENCES

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3. Haque, J., et al. 2001. The murine Pes1 gene encodes a nuclear protein containing a BRCT domain. Genomics 70: 201-210.
4. Kinoshita, Y., et al. 2001. Pescadillo, a novel cell cycle regulatory protein abnormally expressed in malignant cells. J. Biol. Chem. 276: 6656-6665.
5. Lerch-Gaggl, A., et al. 2002. Pescadillo is essential for nucleolar assembly, ribosome biogenesis, and mammalian cell proliferation. J. Biol. Chem. 277: 45347-45355.
6. Maiorana, A., et al. 2004. Role of pescadillo in the transformation and immortalization of mammalian cells. Oncogene 23: 7116-7124.
7. Killian, A., et al. 2004. Inactivation of the RRB1-Pescadillo pathway involved in ribosome biogenesis induces chromosomal instability. Oncogene 23: 8597-8602.
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CHROMOSOMAL LOCATION

Genetic locus: PES1 (human) mapping to 22q12.2.

PRODUCT

pescadillo 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see pescadillo shRNA Plasmid (h): sc-61328-SH and pescadillo shRNA (h) Lentiviral Particles: sc-61328-V as alternate gene silencing products.

For independent verification of pescadillo (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-61328A, sc-61328B and sc-61328C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

pescadillo siRNA (h) is recommended for the inhibition of pescadillo 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 µM in 66 µl. 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

pescadillo (H-10): sc-166300 is recommended as a control antibody for monitoring of pescadillo 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 pescadillo gene expression knockdown using RT-PCR Primer: pescadillo (h)-PR: sc-61328-PR (20 µl). 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.