

PDRG siRNA (h): sc-76099

BACKGROUND

PDRG (p53 and DNA damage regulated), also known as PDRG1 or C20orf126, is a 133 amino acid protein that localizes to the cytoplasm and belongs to the prefoldin subunit β family. Expressed predominately in normal testicular tissue, PDRG is functionally induced by ultraviolet light and is thought to play a role in chaperone-mediated protein folding, possibly playing a role in cellular degradation. The gene encoding PDRG maps to human chromosome 20, which houses over 600 genes some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome. Additionally, chromosome 20 contains a region with numerous genes which are thought important for seminal production and may be potential targets for male contraception.

REFERENCES

1. Luo, X., et al. 2003. Cloning and characterization of a novel gene PDRG that is differentially regulated by p53 and ultraviolet radiation. *Oncogene* 22: 7247-7257.
2. Wong, K.K., et al. 2007. Significantly greater expression of ER, PR, and ECAD in advanced-stage low-grade ovarian serous carcinoma as revealed by immunohistochemical analysis. *Int. J. Gynecol. Pathol.* 26: 404-409.
3. Horta, M.C., et al. 2007. p53 and p21^{WAF1/CIP1} overexpression at the invasive front of lower lip squamous cell carcinoma. *J. Oral Pathol. Med.* 36: 88-92.
4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610789. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Nam, E.J. and Kim, Y.T. 2008. Alteration of cell-cycle regulation in epithelial ovarian cancer. *Int. J. Gynecol. Cancer* 18: 1169-1182.
6. Al-Joudi, F.S., et al. 2008. The expression of p53 in invasive ductal carcinoma of the breast: a study in the North-East States of Malaysia. *Med. J. Malaysia* 63: 96-99.

CHROMOSOMAL LOCATION

Genetic locus: PDRG1 (human) mapping to 20q11.21.

PRODUCT

PDRG 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PDRG shRNA Plasmid (h): sc-76099-SH and PDRG shRNA (h) Lentiviral Particles: sc-76099-V as alternate gene silencing products.

For independent verification of PDRG (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-76099A, sc-76099B and sc-76099C.

PROTOCOLS

See our web site at 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 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

PDRG siRNA (h) is recommended for the inhibition of PDRG 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 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.

GENE EXPRESSION MONITORING

PDRG (C-9): sc-398815 is recommended as a control antibody for monitoring of PDRG 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 κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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 PDRG gene expression knockdown using RT-PCR Primer: PDRG (h)-PR: sc-76099-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.