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PELP1 siRNA (h): sc-45287

BACKGROUND

The estrogen receptor (ER) plays an important role in cancer progression. PELP1/MNAR (proline-, glutamic acid- and leucine-rich protein-1)/modulator of nongenomic activity of estrogen receptor (ER), a novel coregulatory protein, modulates genomic as well as nongenomic activity of estrogen receptors. PELP1 plays an essential role in the proliferation of cancerous endometrial cells. PELP1 expression (in both the stroma and epithelial cells) and localization are widely deregulated in endometrial cancers. In addition, PELP1 and ER β localize predominantly in the cytoplasm of high-grade endometrial tumors. PELP1 coactivates ER-mediated transcription and also serves as a corepressor of other nuclear hormone receptors (NR)- and non NR-sequence-specific transcription factors, including GR, Nur77, AP1, NF κ B and TCF/SRF. PELP1 participates in chromatin remodeling activity via displacement of Histone 1 in cancer cells. It is expressed in all stages of endometrium.

REFERENCES

- Balasenthil, S., et al. 2003. Functional interactions between the estrogen receptor coactivator PELP1/MNAR and retinoblastoma protein. *J. Biol. Chem.* 278: 22119-22127.
- Choi, Y.B., et al. 2004. The transcriptional corepressor, PELP1, recruits HDAC2 and masks histones using two separate domains. *J. Biol. Chem.* 279: 50930-50941.
- Nair, S.S., et al. 2004. Potential role of a novel transcriptional coactivator PELP1 in Histone H1 displacement in cancer cells. *Cancer Res.* 64: 6416-6423.
- Mishra, S.K., et al. 2004. Cloning and functional characterization of PELP1/MNAR promoter. *Gene* 330: 115-122.

CHROMOSOMAL LOCATION

Genetic locus: PELP1 (human) mapping to 17p13.2.

PRODUCT

PELP1 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 PELP1 shRNA Plasmid (h): sc-45287-SH and PELP1 shRNA (h) Lentiviral Particles: sc-45287-V as alternate gene silencing products.

For independent verification of PELP1 (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-45287A, sc-45287B and sc-45287C.

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

PELP1 siRNA (h) is recommended for the inhibition of PELP1 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

PELP1 (E-1): sc-390599 is recommended as a control antibody for monitoring of PELP1 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 PELP1 gene expression knockdown using RT-PCR Primer: PELP1 (h)-PR: sc-45287-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

- Wang, J., et al. 2013. Temporal expression of Pelp1 during proliferation and osteogenic differentiation of rat bone marrow mesenchymal stem cells. *PLoS ONE* 8: e75477.

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.