



Perp siRNA (h): sc-61326

BACKGROUND

The Perp protein, also known as p53 (apoptosis) effector related to PMP22, keratinocytes-associated protein 1 (KCP 1), p53-induced protein PIGPC1 or transmembrane protein THW, contains 193 amino acids and has four transmembrane domains, two extracellular domains and three cytoplasmic domains. Northern blot analysis using a multiple tissue array demonstrates that Perp is predominantly expressed in esophagus and trachea tissues. Perp is required for the integrity of the stratified epithelia defined by p63 (a tumor suppressor gene); expression of Perp in these structures is contingent on the presence of p63. The position of Perp downstream of p63 and p53, as well as its essential role in regular desmosome function, suggest that it, like other adhesion proteins, may be a target for mutation in human blistering diseases or cancer. Furthermore, research demonstrates that the downregulation of Perp correlates with metastatic capacity of human melanoma cell lines, indicating that Perp may be a tumor suppressor.

REFERENCES

1. Hildebrandt, T., et al. 2000. Identification of THW, a putative new tumor suppressor gene. *Anticancer Res.* 20: 2801-2809.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609301. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Ihrie, R.A., et al. 2004. Perpetrating p53-dependent apoptosis. *Cell Cycle* 3: 267-269.
4. Nowak, M., et al. 2004. Perp is required for tissue-specific cell survival during zebrafish development. *Cell Death Differ.* 12: 52-64.
5. Ihrie, R.A., et al. 2005. A new Perp in the lineup: linking p63 and desmosomal adhesion. *Cell Cycle* 4: 873-876.
6. Ceballos, E., et al. 2005. Inhibitory effect of c-Myc on p53-induced apoptosis in leukemia cells. Microarray analysis reveals defective induction of p53 target genes and upregulation of chaperone genes. *Oncogene* 24: 4559-4571.
7. Ihrie, R.A., et al. 2005. Perp is a p63-regulated gene essential for epithelial integrity. *Cell* 120: 843-856.
8. Marques, M.R., et al. 2005. Mice lacking the p53/p63 target gene Perp are resistant to papilloma development. *Cancer Res.* 65: 6551-6556.
9. Paraoan, L., et al. 2006. Expression of p53-induced apoptosis effector Perp in primary uveal melanoma Downregulation is associated with aggressive type. *Exp. Eye Res.* 83: 911-919.

CHROMOSOMAL LOCATION

Genetic locus: PERP (human) mapping to 6q23.3.

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.

PRODUCT

Perp 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 Perp shRNA Plasmid (h): sc-61326-SH and Perp shRNA (h) Lentiviral Particles: sc-61326-V as alternate gene silencing products.

For independent verification of Perp (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-61326A, sc-61326B and sc-61326C.

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

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

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Perp gene expression knockdown using RT-PCR Primer: Perp (h)-PR: sc-61326-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.