

PICT-1 siRNA (m): sc-45699

BACKGROUND

The tumor suppressor PTEN plays an essential role in regulating signaling pathways involved in cell growth and apoptosis and is inactivated in a wide variety of tumors. Protein interacting with PTEN carboxyl terminus 1 (PICT-1), also designated p60 or glioma tumor suppressor candidate region gene 2 protein, binds to the C-terminus of PTEN and regulates its turnover. Five Ser/Thr residues within the C-terminal segment of PTEN, including Ser 380, are phosphorylated upon binding of PTEN to PICT-1 and may contribute to the stabilization of PTEN. PICT-1 is localized to the nucleus and/or nucleolus and is highly expressed in pancreas and heart, but can also be detected in liver, skeletal muscle, placenta and kidney. PICT-1 also interacts with herpes simplex virus 1 regulatory proteins ICP22 and ICP0. The tumor suppressor GLTSCR2 gene, which encodes PICT-1, is located in a 150-kb minimal common deletion region for human gliomas, especially oligodendrogliomas, and maps to human chromosome 19q13.33.

REFERENCES

1. Bruni, R., et al. 1999. A novel cellular protein, p60, interacting with both herpes simplex virus 1 regulatory proteins ICP22 and ICP0 is modified in a cell-type-specific manner and is recruited to the nucleus after infection. *J. Virol.* 73: 3810-3817.
2. Smith, J.S., et al. 2000. A transcript map of the chromosome 19q-arm glioma tumor suppressor region. *Genomics* 64: 44-50.
3. Okahara, F., et al. 2004. Regulation of PTEN phosphorylation and stability by a tumor suppressor candidate protein. *J. Biol. Chem.* 279: 45300-45303.
4. Yang, P., et al. 2005. Polymorphisms in GLTSCR1 and ERCC2 are associated with the development of oligodendrogliomas. *Cancer* 103: 2363-2372.

CHROMOSOMAL LOCATION

Genetic locus: Gltsr2 (mouse) mapping to 7 A2.

PRODUCT

PICT-1 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 PICT-1 shRNA Plasmid (m): sc-45699-SH and PICT-1 shRNA (m) Lentiviral Particles: sc-45699-V as alternate gene silencing products.

For independent verification of PICT-1 (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-45699A, sc-45699B and sc-45699C.

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.

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

PICT-1 shRNA (m) Lentiviral Particles is recommended for the inhibition of PICT-1 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 PICT-1 gene expression knockdown using RT-PCR Primer: PICT-1 (m)-PR: sc-45699-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.