

p38IP siRNA (h): sc-105348

BACKGROUND

p38IP (p38 interacting protein), also known as C13, FP757, SPT20, FAM48A, C13orf19 or SUPT20H, is a 779 amino acid protein that interacts with p38 MAP kinase. Specifically, p38IP and p38 are required for downregulation of E-cadherin during gastrulation. In adult tissues, p38IP is highly expressed in testis and moderately expressed in brain and pituitary gland. p38IP is also expressed in several fetal tissues, including lung, brain, thymus and kidney. Expression of p38IP has been shown to be downregulated in malignant prostate tissues. The gene encoding p38IP maps to human chromosome 13, which houses over 400 genes and comprises approximately 4% of the human genome. Key tumor suppressor genes on chromosome 13 include the breast cancer susceptibility gene, BRCA2, and the RB1 (retinoblastoma) gene.

REFERENCES

1. Dunham, A., et al. 2004. The DNA sequence and analysis of human chromosome 13. *Nature* 428: 522-528.
2. Schmidt, U., et al. 2005. Quantification of C13orf19/P38IP mRNA expression by quantitative real-time PCR in patients with urological malignancies. *Cancer Lett.* 225: 253-260.
3. Zohn, I.E., et al. 2006. p38 and a p38-interacting protein are critical for downregulation of E-cadherin during mouse gastrulation. *Cell* 125: 957-969.
4. Kunze, D., et al. 2006. Functional analyses of C13orf19/P38IP in prostate cell lines. *Oncol. Rep.* 5: 1599-1604.
5. Giacinti, C. and Giordano, A. 2006. RB and cell cycle progression. *Oncogene* 25: 5220-5227.
6. Bugge, M., et al. 2007. Non-disjunction of chromosome 13. *Hum. Mol. Genet.* 16: 2004-2010.

CHROMOSOMAL LOCATION

Genetic locus: SUPT20H (human) mapping to 13q13.3.

PRODUCT

p38IP 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 p38IP shRNA Plasmid (h): sc-105348-SH and p38IP shRNA (h) Lentiviral Particles: sc-105348-V as alternate gene silencing products.

For independent verification of p38IP (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-105348A, sc-105348B and sc-105348C.

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

p38IP siRNA (h) is recommended for the inhibition of p38IP 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

p38IP (C-7): sc-374665 is recommended as a control antibody for monitoring of p38IP 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 p38IP gene expression knockdown using RT-PCR Primer: p38IP (h)-PR: sc-105348-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.