

TSSC3 siRNA (m): sc-63176

BACKGROUND

TSSC3 (tumor-suppressing STF cDNA 3 protein), also known as PHLDA2 (pleckstrin homology-like domain family A member 2), BWR1C, HLDA2 or IPL, is a cytoplasmic protein that is involved in fetal and placental growth. Expressed at high levels in placenta and adult prostate and at low levels in liver, lung and brain, TSSC3 is an apoptosis-related protein that acts as a negative growth regulator and is expressed during normal human development. TSSC3, a protein expressed from the maternal allele, is imprinted on placenta, liver and fetal tissues during embryogenesis and is removed once development is complete. Defects or alterations in the gene encoding TSSC3 are associated with several afflictions such as lung, ovarian and breast cancer, rhabdomyosarcoma, Beckwith-Wiedemann syndrome, Wilms tumor, low birth weight and adrenocortical carcinoma.

REFERENCES

1. Lee, M.P., et al. 1999. Two novel genes in the center of the 11p15 imprinted domain escape genomic imprinting. *Hum. Mol. Genet.* 8: 683-690.
2. Frank, D., et al. 2002. Placental overgrowth in mice lacking the imprinted gene IPL. *Proc. Natl. Acad. Sci. USA* 99: 7490-7495.
3. Salas, M., et al. 2004. Placental growth retardation due to loss of imprinting of PHLDA2. *Mech. Dev.* 121: 1199-1210.
4. Kato, H., et al. 2005. Differential diagnosis between complete and partial mole by TSSC3 antibody completely correlates to DNA diagnosis. *Diagn. Mol. Pathol.* 14: 164-169.
5. McMinn, J., et al. 2006. Unbalanced placental expression of imprinted genes in human intrauterine growth restriction. *Placenta* 27: 540-549.

CHROMOSOMAL LOCATION

Genetic locus: Phlda2 (mouse) mapping to 7 F5.

PRODUCT

TSSC3 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 TSSC3 shRNA Plasmid (m): sc-63176-SH and TSSC3 shRNA (m) Lentiviral Particles: sc-63176-V as alternate gene silencing products.

For independent verification of TSSC3 (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-63176A, sc-63176B and sc-63176C.

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

TSSC3 siRNA (m) is recommended for the inhibition of TSSC3 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 TSSC3 gene expression knockdown using RT-PCR Primer: TSSC3 (m)-PR: sc-63176-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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.