SANTA CRUZ BIOTECHNOLOGY, INC.

HDGFL1 siRNA (m): sc-60815

BACKGROUND

HDGFL1 (hepatoma-derived growth factor-like protein 1), also known as PWWP1 or PWWP domain-containing protein 1, is a 251 amino acid protein belonging to the HDGF family. HDGF was initially characterized as a secreted mitogen from the Huh-7 human hepatoma cell line. This nuclear targeted vascular smooth muscle cell mitogen (VSM) is a heparin-binding protein that is highly expressed in tumor cells where it stimulates proliferation. HDGF is also reported to be involved in organ development and lung remodeling after injury by promoting proliferation of lung epithelial cells. During development, HDGF expression is high in the nucleus and cytoplasm of smooth muscle and endothelial cells. Expression declines after birth but increases during vascular injury. The HDGFL1 gene is located on human chromosome 6 and conserved in mouse, rat, chimpanzee, canine, bovine and more.

REFERENCES

1. Everett, A.D., et al. 2001. Nuclear targeting is required for hepatoma-derived growth factor-stimulated mitogenesis in vascular smooth muscle cells. J. Biol. Chem. 276: 37564-37568.
2. Dietz, F., et al. 2002. The family of hepatoma-derived growth factor proteins: characterization of a new member HRP-4 and classification of its subfamilies. Biochem. J. 366: 491-500.
3. Everett, A.D. and Bushweller, J. 2003. Hepatoma derived growth factor is a nuclear targeted mitogen. Curr. Drug Target 4: 367-371.
4. Ansermet, F., et al. 2010. Mild intellectual disability associated with a progeny of father-daughter incest: genetic and environmental considerations. J. Child Sex. Abus. 19: 337-344.
5. Hung, Y.L., et al. 2015. The first residue of the PWWP motif modulates HATH domain binding, stability, and protein-protein interaction. Biochemistry 54: 4063-4074.
6. Aschebrook-Kilfoy, B., et al. 2015. Genome-wide association study of parity in Bangladeshi women. PLoS ONE 10: e0118488.
7. Guo, S., et al. 2015. Hepatoma-derived growth factor: a novel prognostic biomarker in intrahepatic cholangiocarcinoma. Tumour Biol. 36: 353-364.

CHROMOSOMAL LOCATION

Genetic locus: Hdgfl1 (mouse) mapping to 13 A3.1.

PRODUCT

HDGFL1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HDGFL1 shRNA Plasmid (m): sc-60815-SH and HDGFL1 shRNA (m) Lentiviral Particles: sc-60815-V as alternate gene silencing products.

For independent verification of HDGFL1 (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-60815A, sc-60815B and sc-60815C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

HDGFL1 siRNA (m) is recommended for the inhibition of HDGFL1 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 µM in 66 µl. 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

HDGFL1 (S-18): sc-74088 is recommended as a control antibody for monitoring of HDGFL1 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor HDGFL1 gene expression knockdown using RT-PCR Primer: HDGFL1 (m)-PR: sc-60815-PR (20 µl). 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.