SANTA CRUZ BIOTECHNOLOGY, INC.

PHF20 siRNA (h): sc-76117

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. PHF20 (PHD finger protein 20), also known as NZF, TZP, GLEA2 or HCA58, is a 1,012 amino acid protein that localizes to the nucleus and contains one PHD-type zinc-finger, one C_2H_2-type zinc-finger and one A. T hook DNA-binding domain. Expressed in a variety of tissues, including liver, heart, lung, pancreas, spleen, testis and placenta, PHF20 is thought to function as a transcription factor, possibly playing a role in carcinogenesis. PHF20 exists as two alternatively spliced isoforms which are encoded by a gene that maps to human chromosome 20q11.22.

REFERENCES

1. Fischer, U., et al. 2001. Glioma-expressed antigen 2 (GLEA2): a novel protein that can elicit immune responses in glioblastoma patients and some controls. Clin. Exp. Immunol. 126: 206-213.
2. Wang, Y., et al. 2002. Large scale identification of human hepatocellular carcinoma-associated antigens by autoantibodies. J. Immunol. 169: 1102-1109.
3. Pallasch, C.P., et al. 2005. Autoantibodies against GLEA2 and PHF3 in glioblastoma: tumor-associated autoantibodies correlated with prolonged survival. Int. J. Cancer 117: 456-459.
4. Taniwaki, M., et al. 2006. Gene expression profiles of small-cell lung cancers: molecular signatures of lung cancer. Int. J. Oncol. 29: 567-575.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610335. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Heisel, S.M., et al. 2008. Increased seroreactivity to glioma-expressed antigen 2 in brain tumor patients under radiation. PLoS ONE 3: e2164.

CHROMOSOMAL LOCATION

Genetic locus: PHF20 (human) mapping to 20q11.22.

PRODUCT

PHF20 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PHF20 shRNA Plasmid (h): sc-76117-SH and PHF20 shRNA (h) Lentiviral Particles: sc-76117-V as alternate gene silencing products.

For independent verification of PHF20 (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-76117A, sc-76117B and sc-76117C.

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 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

PHF20 siRNA (h) is recommended for the inhibition of PHF20 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PHF20 gene expression knockdown using RT-PCR Primer: PHF20 (h)-PR: sc-76117-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Tang, N., et al. 2015. Expression of PHF20 protein contributes to good prognosis of NSCLC and is associated with Bax expression. Int. J. Clin. Exp. Pathol. 8: 12198-12206.

RESEARCH USE

For research use only, not for use in diagnostic procedures.