SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF395 siRNA (h): sc-77820

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. As a member of the Krüppel C_2H_2-type zinc-finger protein family, ZNF395 (zinc finger protein 395), also known as PBF (papillomavirus-binding factor) and HDBP2 (Huntington disease gene regulatory region-binding protein 2), is a 513 amino acid protein that contains one C_2H_2-type zinc finger. ZNF395 binds to the 3'-CCGG-5' sequence within the papillomavirus promoter adjacent to a RUNX1-binding motif. It has also been established that ZNF395 binds to a seven base pair region within the Huntington's disease (HD) gene promoter, an essential element for HD gene expression. ZNF395 is widely expressed and probably shuttles between the nucleus and cytoplasm.

REFERENCES

1. Boeckle, S., et al. 2002. A new cellular factor recognizes E2 binding sites of papillomaviruses which mediate transcriptional repression by E2. Virology 293: 103-117.
2. Tanaka, K., et al. 2004. Novel nuclear shuttle proteins, HDBP1 and HDBP2, bind to neuronal cell-specific *cis*-regulatory element in the promoter for the human Huntington's disease gene. J. Biol. Chem. 279: 7275-7286.
3. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609494. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Sichtig, N., et al. 2007. Papillomavirus binding factor (PBF)-mediated inhibition of cell growth is regulated by 14-3-3β. Arch. Biochem. Biophys. 464: 90-99.

CHROMOSOMAL LOCATION

Genetic locus: ZNF395 (human) mapping to 8p21.1.

PRODUCT

ZNF395 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 ZNF395 shRNA Plasmid (h): sc-77820-SH and ZNF395 shRNA (h) Lentiviral Particles: sc-77820-V as alternate gene silencing products.

For independent verification of ZNF395 (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-77820A, sc-77820B and sc-77820C.

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

ZNF395 siRNA (h) is recommended for the inhibition of ZNF395 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.

GENE EXPRESSION MONITORING

ZNF395 (C-1): sc-515519 is recommended as a control antibody for monitoring of ZNF395 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 ZNF395 gene expression knockdown using RT-PCR Primer: ZNF395 (h)-PR: sc-77820-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. Jordanovski, D., et al. 2013. The hypoxia-inducible transcription factor ZNF395 is controlled by IκB kinase-signaling and activates genes involved in the innate immune response and cancer. PLoS ONE 8: e74911.

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.