

ZNF395 siRNA (m): sc-155707

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 C₂H₂-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 C₂H₂-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

- 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.
- 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.
- 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/>
- 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.
- Sichtig, N., et al. 2007. Papillomavirus binding factor binds to SAP30 and represses transcription via recruitment of the HDAC1 corepressor complex. *Arch. Biochem. Biophys.* 467: 67-75.
- Einstein, M.H., et al. 2007. Combined human papillomavirus DNA and human papillomavirus-like particle serologic assay to identify women at risk for high-grade cervical intraepithelial neoplasia. *Int. J. Cancer* 120: 55-59.
- Tsukahara, T., et al. 2008. Prognostic impact and immunogenicity of a novel osteosarcoma antigen, papillomavirus binding factor, in patients with osteosarcoma. *Cancer Sci.* 99: 368-375.
- Tsukahara, T., et al. 2009. Scythe/BAT3 regulates apoptotic cell death induced by papillomavirus binding factor in human osteosarcoma. *Cancer Sci.* 100: 47-53.
- Murat, A., et al. 2009. Modulation of angiogenic and inflammatory response in glioblastoma by hypoxia. *PLoS ONE* 4: e5947.

CHROMOSOMAL LOCATION

Genetic locus: Zfp395 (mouse) mapping to 14 D1.

PROTOCOLS

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

PRODUCT

ZNF395 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 ZNF395 shRNA Plasmid (m): sc-155707-SH and ZNF395 shRNA (m) Lentiviral Particles: sc-155707-V as alternate gene silencing products.

For independent verification of ZNF395 (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-155707A, sc-155707B and sc-155707C.

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 (m) is recommended for the inhibition of ZNF395 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZNF395 gene expression knockdown using RT-PCR Primer: ZNF395 (m)-PR: sc-155707-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.