



ZNF206 siRNA (m): sc-155653

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. ZNF206 (zinc-finger protein 206), also known as ZSCAN10 (zinc finger and SCAN domain containing 10), is a 725 amino acid protein that contains one SCAN box domain and 14 C₂H₂-type zinc fingers. Localized to the nucleus, ZNF206 is thought to play a role in transcriptional regulation events. The gene encoding ZNF206 maps to human chromosome 16p13.3, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Gilbert, F. 1999. Disease genes and chromosomes: disease maps of the human genome. *Chromosome 16. Genet. Test.* 3: 243-254.
2. Manning, G., Whyte, D.B., Martinez, R., Hunter, T. and Sudarsanam, S. 2002. The protein kinase complement of the human genome. *Science* 298: 1912-1934.
3. Coupry, I., Monnet, L., Attia, A.A., Taine, L., Lacombe, D. and Arveiler, B. 2004. Analysis of CBP (CREBBP) gene deletions in Rubinstein-Taybi syndrome patients using real-time quantitative PCR. *Hum. Mutat.* 23: 278-284.
4. Martin, J., Han, C., Gordon, L.A., Terry, A., Prabhakar, S., She, X., Xie, G., Hellsten, U., Chan, Y.M., Altherr, M., Couronne, O., Aerts, A., Bajorek, E., Black, S., Blumer, H., et al. 2004. The sequence and analysis of duplication-rich human chromosome 16. *Nature* 432: 988-994.
5. Demir, E., Bomont, P., Erdem, S., Cavalier, L., Demirci, M., Kose, G., Muftuoglu, S., Cakar, A.N., Tan, E., Aysun, S., Topcu, M., Guicheney, P., Koenig, M. and Topaloglu, H. 2005. Giant axonal neuropathy: clinical and genetic study in six cases. *J. Neurol. Neurosurg. Psychiatry* 76: 825-832.
6. Rakha, E.A., Green, A.R., Powe, D.G., Roylance, R. and Ellis, I.O. 2006. Chromosome 16 tumor-suppressor genes in breast cancer. *Genes Chromosomes Cancer* 45: 527-535.
7. Gervasini, C., Castronovo, P., Bentivegna, A., Mottadelli, F., Faravelli, F., Giovannucci-Uzielli, M.L., Pessagno, A., Lucci-Cordisco, E., Pinto, A.M., Salvati, L., Selicorni, A., Tenconi, R., Neri, G. and Larizza, L. 2007. High frequency of mosaic CREBBP deletions in Rubinstein-Taybi syndrome patients and mapping of somatic and germ-line breakpoints. *Genomics* 90: 567-573.

CHROMOSOMAL LOCATION

Genetic locus: Zscan10 (mouse) mapping to 17 A3.3.

PROTOCOLS

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

PRODUCT

ZNF206 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 ZNF206 shRNA Plasmid (m): sc-155653-SH and ZNF206 shRNA (m) Lentiviral Particles: sc-155653-V as alternate gene silencing products.

For independent verification of ZNF206 (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-155653A, sc-155653B and sc-155653C.

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

ZNF206 siRNA (m) is recommended for the inhibition of ZNF206 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 ZNF206 gene expression knockdown using RT-PCR Primer: ZNF206 (m)-PR: sc-155653-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.