

ZNF185 siRNA (m): sc-155648

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. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. ZNF185 (zinc finger protein 185) is a 689 amino acid protein that contains one LIM zinc-binding domain, that binds two zinc ions and is found in proteins with a variety of different functions such as cytoskeleton organization, development and gene expression. ZNF185 is expressed in kidney, prostate, ovary, pancreas, blood, placenta and ovary. It is thought that ZNF185 may be involved in the regulation of cellular differentiation and/or proliferation. There are three different isoforms of ZNF185 that are produced as a result of alternative splicing events.

REFERENCES

1. Heiss, N.S., Gloeckner, G., Bächner, D., Kioschis, P., Klauck, S.M., Hinzmann, B., Rosenthal, A., Herman, G.E. and Poustka, A. 1997. Genomic structure of a novel LIM domain gene (ZNF185) in Xq28 and comparisons with the orthologous murine transcript. *Genomics* 43: 329-338.
2. Mallon, A.M., Platzer, M., Bate, R., Gloeckner, G., Botcherby, M.R., Nordsiek, G., Strivens, M.A., Kioschis, P., Dangel, A., Cunningham, D., Straw, R.N., Weston, P., Gilbert, M., Fernando, S., Goodall, K., Hunter, G., et al. 2000. Comparative genome sequence analysis of the Bpa/Str region in mouse and man. *Genome Res.* 10: 758-775.
3. Wu, X., Blanck, A., Norstedt, G., Sahlin, L. and Flores-Morales, A. 2002. Identification of genes with higher expression in human uterine leiomyomas than in the corresponding myometrium. *Mol. Hum. Reprod.* 8: 246-254.
4. Vanaja, D.K., Cheville, J.C., Iturria, S.J. and Young, C.Y. 2003. Transcriptional silencing of zinc finger protein 185 identified by expression profiling is associated with prostate cancer progression. *Cancer Res.* 63: 3877-3882.
5. Wong, N., Chan, K.Y., Macgregor, P.F., Lai, P.B., Squire, J.A., Beheshti, B., Albert, M. and Leung, T.W. 2005. Transcriptional profiling identifies gene expression changes associated with IFN- α tolerance in hepatitis C-related hepatocellular carcinoma cells. *Clin. Cancer Res.* 11: 1319-1326.
6. Medina, P.P., Carretero, J., Ballestar, E., Angulo, B., Lopez-Rios, F., Esteller, M. and Sanchez-Cespedes, M. 2005. Transcriptional targets of the chromatin-remodelling factor SMARCA4/BRG1 in lung cancer cells. *Hum. Mol. Genet.* 14: 973-982.
7. Zhang, J.S., Gong, A. and Young, C.Y. 2007. ZNF185, an Actin-cytoskeleton-associated growth inhibitory LIM protein in prostate cancer. *Oncogene* 26: 111-122.
8. Ma, Y., Qi, X., Du, J., Song, S., Feng, D., Qi, J., Zhu, Z., Zhang, X., Xiao, H., Han, Z. and Hao, X. 2009. Identification of candidate genes for human pituitary development by EST analysis. *BMC Genomics* 10: 109.
9. Pan, Z.F., Feng, W.G., Chen, L.M., Liu, X.Y., Zhao, C.L., Lian, B., Yu, W.J. and Gao, Z.Q. 2010. ZNF185 gene cloning and the localization in mouse testis. *Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi* 26: 973-975.

CHROMOSOMAL LOCATION

Genetic locus: Zfp185 (mouse) mapping to X A7.3.

PRODUCT

ZNF185 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 ZNF185 shRNA Plasmid (m): sc-155648-SH and ZNF185 shRNA (m) Lentiviral Particles: sc-155648-V as alternate gene silencing products.

For independent verification of ZNF185 (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-155648A, sc-155648B and sc-155648C.

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

ZNF185 siRNA (m) is recommended for the inhibition of ZNF185 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 ZNF185 gene expression knockdown using RT-PCR Primer: ZNF185 (m)-PR: sc-155648-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.