SANTA CRUZ BIOTECHNOLOGY, INC.

ZFP91 siRNA (h): sc-106726

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. ZNF91, also known as PZF or FKSG11, is a member of the Krüppel C_2H_2-type zinc-finger family of transcriptional regulators. Localized to the nucleus, ZNF91 is expressed ubiquitously, with particularly high levels in testis. Two isoforms (namely isoform 1 and isoform 2) of ZNF91 exist as a result of alternative splicing events, and isoform 2 is testis-specific. ZNF91 has been identified to play a role in transcriptional regulation, cell proliferation and anti-apoptotic events.

REFERENCES

1. Bellefroid, E.J., et al. 1995. Emergence of the ZNF91 Krüppel-associated box-containing zinc-finger gene family in the last common ancestor of anthropoidea. Proc. Natl. Acad. Sci. USA 92: 10757-10761.
2. Khil, P.P., et al. 1998. Long terminal repeat of the human endogenous retrovirus HERV-K in the intron of the ZNF91 gene. Bioorg. Khim. 24: 126-131.
3. Iuchi, S. 2001. Three classes of C_2H_2 zinc-finger proteins. Cell. Mol. Life Sci. 58: 625-635.
4. Nishimura, T., et al. 2001. Characterization of the human FcγRIIB gene promoter: human zinc-finger proteins (ZNF140 and ZNF91) that bind to different regions function as transcription repressors. Int. Immunol. 13: 1075-1084.
5. Unoki, M., et al. 2003. Identification of a novel human gene, ZFP91, involved in acute myelogenous leukemia. Int. J. Oncol. 22: 1217-1223.
6. Hamilton, A.T., et al. 2006. Evolutionary expansion and divergence in the ZNF91 subfamily of primate-specific zinc-finger genes. Genome Res. 16: 584-594.
7. Vogel, M.J., et al. 2006. Human heterochromatin proteins form large domains containing KRAB-ZNF genes. Genome Res. 16: 1493-1504.

CHROMOSOMAL LOCATION

Genetic locus: ZFP91 (human) mapping to 11q12.1.

PRODUCT

ZFP91 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 ZFP91 shRNA Plasmid (h): sc-106726-SH and ZFP91 shRNA (h) Lentiviral Particles: sc-106726-V as alternate gene silencing products.

For independent verification of ZFP91 (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-106726A, sc-106726B and sc-106726C.

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

ZFP91 siRNA (h) is recommended for the inhibition of ZFP91 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 ZFP91 gene expression knockdown using RT-PCR Primer: ZFP91 (h)-PR: sc-106726-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.