

ZFP386 siRNA (m): sc-155553

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. ZFP386 (zinc finger protein 386), also known as Kzf1 or KIAA4205, is a 626 amino acid protein that contains one KRAB domain. Localized to the nucleus, ZFP386 is expressed as two isoforms produced by alternative splicing events. The gene that encodes ZFP386 maps to murine chromosome 12. Murine chromosome 12 houses approximately 670 protein-coding genes, including immunoglobulin heavy chain proteins (IgHs), Myosin light chain proteins, eukaryotic translation initiation factors (eIFs) and thyroid growth factors, suggesting that chromosome 12-localized genes play an important role in cellular growth and development.

REFERENCES

1. D'Eustachio, P. 1984. A genetic map of mouse chromosome 12 composed of polymorphic DNA fragments. *J. Exp. Med.* 160: 827-838.
2. Freemont, P.S. 1993. The RING finger. A novel protein sequence motif related to the zinc finger. *Ann. N.Y. Acad. Sci.* 684: 174-192.
3. Matthews, J.M. and Sunde, M. 2002. Zinc fingers—folds for many occasions. *IUBMB Life.* 54: 351-355.
4. Brown, R.S. 2005. Zinc finger proteins: getting a grip on RNA. *Curr. Opin. Struct. Biol.* 15: 94-98.
5. Hall, T.M. 2005. Multiple modes of RNA recognition by zinc finger proteins. *Curr. Opin. Struct. Biol.* 15: 367-373.
6. Tevendale, M., Watkins, M., Rasberry, C., Cattanaach, B. and Ferguson-Smith, A.C. 2006. Analysis of mouse conceptuses with uniparental duplication/deficiency for distal chromosome 12: comparison with chromosome 12 uniparental disomy and implications for genomic imprinting. *Cytogenet. Genome Res.* 113: 215-222.
7. Gamsjaeger, R., Liew, C.K., Loughlin, F.E., Crossley, M. and Mackay, J.P. 2007. Sticky fingers: zinc-fingers as protein-recognition motifs. *Trends Biochem. Sci.* 32: 63-70.

CHROMOSOMAL LOCATION

Genetic locus: Zfp386 (mouse) mapping to 12 F2.

PRODUCT

ZFP386 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 ZFP386 shRNA Plasmid (m): sc-155553-SH and ZFP386 shRNA (m) Lentiviral Particles: sc-155553-V as alternate gene silencing products.

For independent verification of ZFP386 (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-155553A, sc-155553B and sc-155553C.

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

ZFP386 siRNA (m) is recommended for the inhibition of ZFP386 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 ZFP386 gene expression knockdown using RT-PCR Primer: ZFP386 (m)-PR: sc-155553-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.

PROTOCOLS

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