

ZFP260 siRNA (h): sc-97723

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. ZFP260 (zinc finger protein 260), also known as OZRF1 or ZNF260, is a 412 amino acid nuclear protein belonging to the krueppel C₂H₂-type zinc-finger protein family. Containing thirteen C₂H₂-type zinc fingers, ZFP260 is a transcription factor that acts as a cardiac regulator and an effector of α 1-adrenergic signaling. ZFP260 binds to PE response elements (PERE) present in the promoter of genes and acts as a direct transcriptional activator of ANP. ZFP260 interacts with GATA-4 and is upregulated by activation of α 1-adrenergic receptors.

REFERENCES

- Thiesen, H.J. 1990. Multiple genes encoding zinc finger domains are expressed in human T cells. *New Biol.* 2: 363-374.
- Blotti re, L., Apiou, F., Ferbus, D., Guenzi, C., Dutrillaux, B., Prosperi and M.T., Goubin, G. 1999. Cloning, characterization, and chromosome assignment of Zfp146 the mouse ortholog of human ZNF146, a gene amplified and overexpressed in pancreatic cancer, and Zfp260 a closely related gene. *Cytogenet. Cell Genet.* 85: 297-300.
- Laity, J.H., Lee, B.M. and Wright, P.E. 2001. Zinc finger proteins: new insights into structural and functional diversity. *Curr. Opin. Struct. Biol.* 11: 39-46.
- Matthews, J.M. and Sunde, M. 2002. Zinc fingers—folds for many occasions. *IUBMB Life* 54: 351-355.
- Huang, J., Teng, L., Li, L., Liu, T., Li, L., Chen, D., Xu, L.G., Zhai, Z. and Shu, H.B. 2004. ZNF216 is an A20-like and I B kinase γ -interacting inhibitor of NF B activation. *J. Biol. Chem.* 279: 16847-16853.
- Brown, R.S. 2005. Zinc finger proteins: getting a grip on RNA. *Curr. Opin. Struct. Biol.* 15: 94-98.
- Debrus, S., Rahbani, L., Marttila, M., Delorme, B., Paradis and P., Nemer, M. 2005. The zinc finger-only protein ZFP260 is a novel cardiac regulator and a nuclear effector of α 1-adrenergic signaling. *Mol. Cell. Biol.* 25: 8669-8682.
- Hall, T.M. 2005. Multiple modes of RNA recognition by zinc finger proteins. *Curr. Opin. Struct. Biol.* 15: 367-373.
- 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: ZNF260 (human) mapping to 19q13.12.

PROTOCOLS

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

PRODUCT

ZFP260 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZFP260 shRNA Plasmid (h): sc-97723-SH and ZFP260 shRNA (h) Lentiviral Particles: sc-97723-V as alternate gene silencing products.

For independent verification of ZFP260 (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-97723A, sc-97723B and sc-97723C.

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

ZFP260 siRNA (h) is recommended for the inhibition of ZFP260 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 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 ZFP260 gene expression knockdown using RT-PCR Primer: ZFP260 (h)-PR: sc-97723-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.