



Vgl-4 siRNA (m): sc-155104

BACKGROUND

The transcriptional enhancer factor-1 (TEF-1) family of transcription factors regulate tissue-specific gene expression in muscle and placenta. The mechanism whereby TEF-1 confers tissue specificity depends largely on the interaction of TEF-1 with tissue-specific cofactors. Transcription cofactor Vgl-4 (vestigial-like protein 4) is a 290 amino acid nuclear protein that interacts with TEF-1 and MEF-2. Vgl-4 is the only member of the vestigial-like family that is expressed in heart. Overexpression of Vgl-4 in cardiac myocytes interferes with basal expression and α 1-adrenergic receptor-dependent activation of a TEF-1 dependent skeletal α -Actin promoter. This suggests that Vgl-4 counteracts α 1-adrenergic activation of gene expression in cardiomyocytes. There are two isoforms of Vgl-4 that are produced as a result of alternative splicing events.

REFERENCES

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- Mahoney, W.M., Hong, J.H., Yaffe, M.B. and Farrance, I.K. 2005. The transcriptional co-activator TAZ interacts differentially with transcriptional enhancer factor-1 (TEF-1) family members. *Biochem. J.* 388: 217-225.
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CHROMOSOMAL LOCATION

Genetic locus: Vgll4 (mouse) mapping to 6 E3.

PROTOCOLS

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

PRODUCT

Vgl-4 siRNA (m) is a pool of 2 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 Vgl-4 shRNA Plasmid (m): sc-155104-SH and Vgl-4 shRNA (m) Lentiviral Particles: sc-155104-V as alternate gene silencing products.

For independent verification of Vgl-4 (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-155104A and sc-155104B.

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

Vgl-4 siRNA (m) is recommended for the inhibition of Vgl-4 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 Vgl-4 gene expression knockdown using RT-PCR Primer: Vgl-4 (m)-PR: sc-155104-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.