SANTA CRUZ BIOTECHNOLOGY, INC.

Evx-2 siRNA (m): sc-38662

BACKGROUND

Homeodomain proteins are transcription factors that share a related DNA binding domain, the homeodomain. They control gene expression in order to regulate development in all eukaryotes. Hox genes are required for the establishment of regional identities along body axes. The vertebrate Hox genes map closely to Evx-1 and Evx-2, the homologues of the *Drosophila melanogaster* even skipped gene. Evx-1 maps to mouse chromosome 6, near the Hox-1 gene cluster, and Evx-2 maps to mouse chromosome 2, near the Hox-4 cluster. The close linkage of the Evx and Hox genes is distinct because Evx expression is partly controlled by mechanisms acting on the Hox genes. Evx-1 and Evx-2 belong to a homeodomain protein family that also controls body plan formation, and play a crucial role in gastrulation, neurogenesis, appendage development, and tailbud formation.

REFERENCES

1. Dush, M.K. and Martin, G.R. 1992. Analysis of mouse Evx genes: Evx-1 displays graded expression in the primitive streak. Dev. Biol. 151: 273-287.
2. Herault, Y., Hraba-Renevey, S., van der Hoeven, F. and Duboule, D. 1996. Function of the Evx-2 gene in the morphogenesis of vertebrate limbs. EMBO J. 15: 6727-6738.
3. Sordino, P., Duboule, D. and Kondo, T. 1996. Zebrafish Hoxa and Evx-2 genes: cloning, developmental expression and implications for the functional evolution of posterior Hox genes. Mech. Dev. 59: 165-175.
4. Mannervik, M. 1999. Target genes of homeodomain proteins. BioEssays 21: 267-270.
5. Ferrier, D.E., Minguillon, C., Cebrian, C. and Garcia-Fernandez, J. 2001. Amphioxus Evx genes: implications for the evolution of the Midbrain-Hindbrain Boundary and the chordate tailbud. Dev. Biol. 237: 270-281.

CHROMOSOMAL LOCATION

Genetic locus: Evx2 (mouse) mapping to 2 C3.

PRODUCT

Evx-2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Evx-2 shRNA Plasmid (m): sc-38662-SH and Evx-2 shRNA (m) Lentiviral Particles: sc-38662-V as alternate gene silencing products.

For independent verification of Evx-2 (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-38662A, sc-38662B and sc-38662C.

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.

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

Evx-2 siRNA (m) is recommended for the inhibition of Evx-2 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 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 Evx-2 gene expression knockdown using RT-PCR Primer: Evx-2 (m)-PR: sc-38662-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.