SANTA CRUZ BIOTECHNOLOGY, INC.

IRX6 siRNA (m): sc-146291

BACKGROUND

The Iroquois homeobox gene family of transcription factors regulate various aspects of embryonic development, including anterior/posterior and dorsal/ventral axis patterning and regionalization in both vertebrate and invertebrate central nervous systems. The Iroquois family is comprised of two groups termed IRXA and IRXB, which map to chromosomes 8 and 13 in mice. The IRXA group includes IRX1, IRX2 and IRX4, and the IRXB group consists of IRX3, IRX5 and IRX6. IRX6 (Iroquois related homeobox 6), also known as IRXB3 (homeodomain protein IRXB3), is a 438 amino acid nuclear protein belonging to the Iroquois homeobox family. IRX6 contains one homeobox DNA-binding domain and is encoded by a gene located on mouse chromosome 8 C5.

REFERENCES

1. Christoffels, V.M., Keijser, A.G., Houweling, A.C., Clout, D.E. and Moorman, A.F. 2000. Patterning the embryonic heart: identification of five mouse Iroquois homeobox genes in the developing heart. Dev. Biol. 224: 263-274.
2. Peters, T., Dildrop, R., Ausmeier, K. and Rüther, U. 2000. Organization of mouse Iroquois homeobox genes in two clusters suggests a conserved regulation and function in vertebrate development. Genome Res. 10: 1453-1462.
3. Ogura, K., Matsumoto, K., Kuroiwa, A., Isobe, T., Otoguro, T., Jurecic, V., Baldini, A., Matsuda, Y. and Ogura, T. 2001. Cloning and chromosome mapping of human and chicken Iroquois (IRX) genes. Cytogenet. Cell Genet. 92: 320-325.
4. Cavodeassi, F., Modolell, J. and Gómez-Skarmeta, J.L. 2001. The Iroquois family of genes: from body building to neural patterning. Development 128: 2847-2855.
5. Mummenhoff, J., Houweling, A.C., Peters, T., Christoffels, V.M. and Rüther, U. 2001. Expression of IRX6 during mouse morphogenesis. Mech. Dev. 103: 193-195.
6. Houweling, A.C., Dildrop, R., Peters, T., Mummenhoff, J., Moorman, A.F., Rüther, U. and Christoffels, V.M. 2001. Gene and cluster-specific expression of the Iroquois family members during mouse development. Mech. Dev. 107: 169-174.

CHROMOSOMAL LOCATION

Genetic locus: Irx6 (mouse) mapping to 8 C5.

PRODUCT

IRX6 siRNA (m) is a target-specific 19-25 nt siRNA 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 IRX6 shRNA Plasmid (m): sc-146291-SH and IRX6 shRNA (m) Lentiviral Particles: sc-146291-V as alternate gene silencing products.

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

IRX6 siRNA (m) is recommended for the inhibition of IRX6 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 IRX6 gene expression knockdown using RT-PCR Primer: IRX6 (m)-PR: sc-146291-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.