SANTA CRUZ BIOTECHNOLOGY, INC.

CHURC1 siRNA (m): sc-142338

BACKGROUND

CHURC1, also known as protein Churchill, is a 112 amino acid protein that plays a critical role in neural induction during embryogenesis. The fibroblast growth family of proteins (FGFs) has been identified as necessary factors in mesoderm formation and neural induction. CHURC1, a putative zinc finger protein, is a transcriptional activator that mediates FGF signaling. Furthermore, CHURC1 is thought to play a role in the regulation of cell movement. Although CHURC1 does not bind to DNA, it functions as a transcriptional regulator and a protein-interaction factor. Two isoforms of CHURC1 exist as a result of alternative splicing events.

REFERENCES

1. Streit, A., et al. 2000. Initiation of neural induction by FGF signalling before gastrulation. Nature 406: 74-78.
2. Delaune, E., et al. 2005. Neural induction in *Xenopus* requires early FGF signalling in addition to BMP inhibition. Development 132: 299-310.
3. Stern, C.D. 2005. Neural induction: old problem, new findings, yet more questions. Development 132: 2007-2021.
4. Lee, B.M., et al. 2007. Embryonic neural inducing factor churchill is not a DNA-binding zinc finger protein: solution structure reveals a solvent-exposed β-sheet and zinc binuclear cluster. J. Mol. Biol. 371: 1274-1289.
5. Krupp, W., et al. 2008. Genome-wide genetic characterization of an atypical meningioma by single-nucleotide polymorphism array-based mapping and classical cytogenetics. Cancer Genet. Cytogenet. 184: 87-93.

CHROMOSOMAL LOCATION

Genetic locus: Churc1 (mouse) mapping to 12 C3.

PRODUCT

CHURC1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CHURC1 shRNA Plasmid (m): sc-142338-SH and CHURC1 shRNA (m) Lentiviral Particles: sc-142338-V as alternate gene silencing products.

For independent verification of CHURC1 (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-142338A and sc-142338B.

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

CHURC1 siRNA (m) is recommended for the inhibition of CHURC1 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 CHURC1 gene expression knockdown using RT-PCR Primer: CHURC1 (m)-PR: sc-142338-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.

PROTOCOLS

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