SANTA CRUZ BIOTECHNOLOGY, INC.

CHD9 siRNA (m): sc-72887

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The Power to Question

BACKGROUND

CHD9 (chromodomain-helicase-DNA-binding protein 9), also known as chromatin-related mesenchymal modulator (CReMM), PPAR-α-interacting complex protein 320 kDa, kismet homolog 2 or CHROM1, is a 2,897 amino acid protein belonging to the Snf2/Rad54 helicase family. The CHD family of proteins are ATP-dependent chromatin remodeling enzymes which combine chromodomains with SWI2/Snf2 ATPase/helicase motifs and DNA-binding capability. Localized to the cytoplasm and the nucleus, CHD9 contains two chromodomains, one ATP-binding helicase domain and one C-terminal helicase domain. Chromodomains are protein regions of about 40-50 amino acid residues found in proteins associated with chromatin remodeling and manipulation. The domain is highly conserved among both plants and animals and is found in a large variety of proteins from many genomes. CHD9 acts as a transcriptional coactivator for PPARα and may also be an ATP-dependent chromatin remodeling protein. CHD9 is widely expressed at low levels and is present as three isoforms produced by alternative splicing.

REFERENCES

1. Jones, D.O., et al. 2000. Mammalian chromodomain proteins: their role in genome organisation and expression. Bioessays 22: 124-137.
2. Shur, I., et al. 2005. Characterization and functional analysis of CReMM, a novel chromodomain helicase DNA-binding protein. J. Mol. Biol. 352: 646-655.
3. Surapureddi, S., et al. 2006. PRIC320, a transcription coactivator, isolated from peroxisome proliferator-binding protein complex. Biochem. Biophys. Res. Commun. 343: 535-543.
4. Shur, I., et al. 2006. *In vivo* association of CReMM/CHD9 with promoters in osteogenic cells. J. Cell. Physiol. 207: 374-378.
5. Marom, R., et al. 2006. Expression and regulation of CReMM, a chromodomain helicase-DNA-binding (CHD), in marrow stroma derived osteoprogenitors. J. Cell. Physiol. 207: 628-635.
6. Shur, I., et al. 2006. Dynamic interactions of chromatin-related mesenchymal modulator, a chromodomain helicase-DNA-binding protein, with promoters in osteoprogenitors. Stem Cells 24: 1288-1293.

CHROMOSOMAL LOCATION

Genetic locus: Chd9 (mouse) mapping to 8 C5.

PRODUCT

CHD9 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 CHD9 shRNA Plasmid (m): sc-72887-SH and CHD9 shRNA (m) Lentiviral Particles: sc-72887-V as alternate gene silencing products.

For independent verification of CHD9 (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-72887A, sc-72887B and sc-72887C.

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

CHD9 siRNA (m) is recommended for the inhibition of CHD9 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 CHD9 gene expression knockdown using RT-PCR Primer: CHD9 (m)-PR: sc-72887-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.