SANTA CRUZ BIOTECHNOLOGY, INC.

ANKRD11 siRNA (m): sc-77402

BACKGROUND

ANKRD11 (Ankyrin repeat domain-containing protein 11, Ankyrin repeat-containing cofactor 1) is a 2,664 amino acid protein encoded by the human gene ANKRD11. This nuclear protein belongs to a novel family of Ankyrin repeat-containing cofactors for p160 nuclear receptor coactivators and contains four Ankyrin repeats. Members of the p160 nuclear receptor coactivators interact with liganded nuclear receptors to enhance transcription of target genes. ANKRD11 has two intrinsic repression domains (RD): an N-terminal RD1 at residues 318-611 and a C-terminal RD2 at 2369-2663. ANKRD11 also contains an activation domain (AD) capable of stimulating transcription *in vitro*. The minimal AD is delimited to a 70-amino acid region at residues 2076-2145. Overall, ANKRD11 acts as a transcriptional repressor, suggesting that RD domains may suppress the AD activity. ANKRD11 shows the potential of modulating a combination of repression and activation signals.

REFERENCES

1. Zhang, A., et al. 2004. Identification of a novel family of Ankyrin repeats containing cofactors for p160 nuclear receptor coactivators. J. Biol. Chem. 279: 33799-33805.
2. Olsen, J.V., et al. 2006. Global, *in vivo,* and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.
3. Linke, S., et al. 2007. Characterization of Ankyrin repeat-containing proteins as substrates of the asparaginyl hydroxylase factor inhibiting hypoxia-inducible transcription factor. Methods Enzymol. 435: 61-85.
4. Zhang, A., et al. 2007. Characterization of transcriptional regulatory domains of Ankyrin repeat cofactor-1. Biochem. Biophys. Res. Commun. 358: 1034-1040.
5. Zhang, A., et al. 2007. Subcellular localization of Ankyrin repeats cofactor-1 regulates its corepressor activity. J. Cell. Biochem. 101: 1301-1315.
6. Barbaric, I., et al. 2007. An ENU-induced mutation in the ANKRD11 gene results in an osteopenia-like phenotype in the mouse mutant Yoda. Physiol. Genomics 32: 311-321.

CHROMOSOMAL LOCATION

Genetic locus: Ankrd11 (mouse) mapping to 8 E1.

PRODUCT

ANKRD11 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 ANKRD11 shRNA Plasmid (m): sc-77402-SH and ANKRD11 shRNA (m) Lentiviral Particles: sc-77402-V as alternate gene silencing products.

For independent verification of ANKRD11 (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-77402A, sc-77402B and sc-77402C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

ANKRD11 siRNA (m) is recommended for the inhibition of ANKRD11 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.

GENE EXPRESSION MONITORING

ANKRD11 (2022C8a): sc-81049 is recommended as a control antibody for monitoring of ANKRD11 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ANKRD11 gene expression knockdown using RT-PCR Primer: ANKRD11 (m)-PR: sc-77402-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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