SANTA CRUZ BIOTECHNOLOGY, INC.

AP-2δ siRNA (h): sc-95077

BACKGROUND

AP-2 transcription factor family members include AP-2α, AP-2β, AP-2γ, AP-2δ and AP-2ε, which specifically bind to DNA and regulate transcription of selected genes. AP-2 proteins contain a helix-span-helix motif at their C-terminus and a basic central region that, together, mediate DNA binding and dimerization. AP-2 family members have various roles in apoptosis, development, morphogenesis and cell-cycle control. AP-2δ, also known as TFAP2D or TFAP2BL1 (transcription factor AP-2 β-like 1), is a nuclear protein and is predominantly expressed in skeletal muscle, brain, small intestine, prostate, placenta and thymus. AP-2δ binds to DNA as a dimer, associated either as a homodimer or as a heterodimer with other members of the AP-2 family. Distinct from other members of the family, AP-2δ exhibits a different DNA sequence affinity and lacks the PY motif as well as other critical residues in its transactivation domain. This suggests that AP-2δ may interact with a separate group of coactivators and transactivate genes differently than the other AP-2 proteins.

REFERENCES

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4. Zhao, F., et al. 2003. Expression of Tfap2d, the gene encoding the transcription factor Ap-2δ, during mouse embryogenesis. Gene Expr. Patterns 3: 213-217.
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6. Wenke, A.K., et al. 2006. Regulation of integrin α10 expression in chondrocytes by the transcription factors AP-2ε and Ets-1. Biochem. Biophys. Res. Commun. 345: 495-501.
7. Kim, J.M., et al. 2006. Identification of genes related to Parkinson's disease using expressed sequence tags. DNA Res. 13: 275-286.
8. Sun, L., et al. 2007. Identification of genes differentially regulated by transcription factor, AP-2δ. Front. Biosci. 12: 1699-1706.

CHROMOSOMAL LOCATION

Genetic locus: TFAP2D (human) mapping to 6p12.3.

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.

PRODUCT

AP-2δ siRNA (h) 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 AP-2δ shRNA Plasmid (h): sc-95077-SH and AP-2δ shRNA (h) Lentiviral Particles: sc-95077-V as alternate gene silencing products.

For independent verification of AP-2δ (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-95077A, sc-95077B and sc-95077C.

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

AP-2δ siRNA (h) is recommended for the inhibition of AP-2δ expression in human 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 AP-2δ gene expression knockdown using RT-PCR Primer: AP-2δ (h)-PR: sc-95077-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.