

# AP-2 $\delta$ siRNA (m): sc-141133

## BACKGROUND

AP-2 transcription factor family members include AP-2 $\alpha$ , AP-2 $\beta$ , AP-2 $\gamma$ , AP-2 $\delta$  and AP-2 $\epsilon$ , 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-2 $\delta$ , also known as TFAP2D or TFAP2BL1 (transcription factor AP-2 $\beta$ -like 1), is a nuclear protein and is predominantly expressed in skeletal muscle, brain, small intestine, prostate, placenta and thymus. AP-2 $\delta$  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-2 $\delta$  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-2 $\delta$  may interact with a separate group of coactivators and transactivate genes differently than the other AP-2 proteins.

## REFERENCES

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- Zhao, F., et al. 2003. Expression of Tfap2d, the gene encoding the transcription factor Ap-2 $\delta$ , during mouse embryogenesis. *Gene Expr. Patterns* 3: 213-217.
- Eckert, D., et al. 2005. The AP-2 family of transcription factors. *Genome Biol.* 6: 246.
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## CHROMOSOMAL LOCATION

Genetic locus: Tcfap2d (mouse) mapping to 1 A3.

## PRODUCT

AP-2 $\delta$  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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AP-2 $\delta$  shRNA Plasmid (m): sc-141133-SH and AP-2 $\delta$  shRNA (m) Lentiviral Particles: sc-141133-V as alternate gene silencing products.

For independent verification of AP-2 $\delta$  (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-141133A, sc-141133B and sc-141133C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

AP-2 $\delta$  siRNA (m) is recommended for the inhibition of AP-2 $\delta$  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  $\mu$ M in 66  $\mu$ l. 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-2 $\delta$  gene expression knockdown using RT-PCR Primer: AP-2 $\delta$  (m)-PR: sc-141133-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.