SANTA CRUZ BIOTECHNOLOGY, INC.

ARP-1 siRNA (m): sc-38819

BACKGROUND

COUP (chicken ovalbumin upstream promoter) transcription factors have been cloned in several species and identified as orphan members of the steroid/thyroid hormone receptor superfamily. COUP-TFI (also designated COUP or EAR-3) and ARP-1 (also designated COUP-TFII) exhibit highly regulated and overlapping expression in most tissues. COUP-TFs are highly expressed in the developing and central nervous system, suggesting that these factors may be important in neural development and differentiation. COUP-TFs can compete for binding to response elements which are common to other members of this family, including RAR, RXR, PPAR, HNF-4, VDR and TR. They have been shown to act as negative regulators as well as initiators of transcription.

REFERENCES

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2. Wang, L.H., et al. 1989. COUP transcription factor is a member of the steroid receptor superfamily. Nature 340: 163-166.
3. Ladias, J.A., et al. 1991. Regulation of the apolipoprotein AI gene by ARP-1, a novel member of the steroid receptor superfamily. Science 251: 561-565.
4. Umesono, K., et al. 1991. Direct repeats as selective response elements for the thyroid hormone, retinoic acid and vitamin D_3 receptors. Cell 65: 1255-1266.
5. Cooney, A., et al. 1993. Multiple mechanisms of chicken ovalbumin upstream promoter transcription factor-dependent repression of transactivation by the vitamin D, thyroid hormone, and retinoic acid receptors. J. Biol. Chem. 268: 4152-4160.
6. Jonk, L.J.C., et al. 1994. Cloning and expression during development of three murine members of the COUP family of nuclear orphan receptors. Mech. Dev. 47: 81-97.
7. Liu, P.X., et al. 1994. An evolutionary conserved COUP-TF binding element in a neural-specific gene and COUP-TF expression patterns support a major role for COUP-TF in neural development. Mol. Endocrinol. 8: 1774-1788.
8. Qiu, Y., et al. 1996. Chicken ovalbumin upstream promoter-transcription factors and their regulation. J. Steroid Biochem. Mol. Biol. 56: 81-85.

CHROMOSOMAL LOCATION

Genetic locus: Nr2f2 (mouse) mapping to 7 D1.

PRODUCT

ARP-1 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 ARP-1 shRNA Plasmid (m): sc-38819-SH and ARP-1 shRNA (m) Lentiviral Particles: sc-38819-V as alternate gene silencing products.

For independent verification of ARP-1 (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-38819A, sc-38819B and sc-38819C.

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

ARP-1 siRNA (m) is recommended for the inhibition of ARP-1 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

ARP-1 (E-11): sc-271940 is recommended as a control antibody for monitoring of ARP-1 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ARP-1 gene expression knockdown using RT-PCR Primer: ARP-1 (m)-PR: sc-38819-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.