



N-CoR siRNA (m): sc-36002

BACKGROUND

Retinoids are metabolites of vitamin A (retinol) and are believed to represent important signaling molecules during vertebrate development and tissue differentiation. Two families of retinoid receptors have been identified. Retinoic acid receptors (RARs), include RAR α , RAR β and RAR γ , each of which have a high affinity for all-*trans* retinoic acids and belong to the same class of nuclear transcription factors as thyroid hormone receptors, vitamin D₃ receptor and ecdysone receptor. Two cofactors that function to repress transcription, designated SMRT and N-CoR, have been shown to associate with the thyroid receptor and RAR in their unliganded state and are released from them upon ligand binding. The carboxy termini of both proteins contain receptor interacting domains while their amino termini contain two previously undescribed repressor domains. SMRT (silencing mediator for RARs and TRs) is 1,495 amino acids in length. N-CoR (nuclear receptor corepressor) is a protein 2,453 amino acids in length.

REFERENCES

1. Ishikawa, T., et al. 1990. A functional retinoic acid receptor encoded by the gene on human chromosome 12. *Mol. Endocrinol.* 4: 837-844.
2. Yang, N., et al. 1991. Characterization of DNA-binding and retinoic acid-binding properties of retinoic acid receptor. *Proc. Natl. Acad. Sci. USA* 88: 3559-3563.
3. Bhat, M.K., et al. 1994. Phosphorylation enhances the target gene sequence-dependent dimerization of thyroid hormone receptor with retinoid X receptor. *Proc. Natl. Acad. Sci. USA* 91: 7927-7931.

CHROMOSOMAL LOCATION

Genetic locus: Ncor1 (mouse) mapping to 11 B2.

PRODUCT

N-CoR 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see N-CoR shRNA Plasmid (m): sc-36002-SH and N-CoR shRNA (m) Lentiviral Particles: sc-36002-V as alternate gene silencing products.

For independent verification of N-CoR (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-36002A, sc-36002B and sc-36002C.

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

APPLICATIONS

N-CoR siRNA (m) is recommended for the inhibition of N-CoR 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 μ M in 66 μ 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.

GENE EXPRESSION MONITORING

N-CoR (F-1): sc-515934 is recommended as a control antibody for monitoring of N-CoR 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 N-CoR gene expression knockdown using RT-PCR Primer: N-CoR (m)-PR: sc-36002-PR (20 μ l, 599 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Jessen, H.M., et al. 2010. The nuclear receptor corepressor has organizational effects within the developing amygdala on juvenile social play and anxiety-like behavior. *Endocrinology* 151: 1212-1220.
2. Sun, J.Y., et al. 2023. An IL-6/Stat3/MR/FGF21 axis mediates heart-liver cross-talk after myocardial infarction. *Sci. Adv.* 9: eade4110.

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.