**Rev-erbα siRNA (m): sc-61459**

**BACKGROUND**

Orphan nuclear receptors NR1D1 and NR1D2 are more commonly designated Rev-erbα and Rev-erbβ, respectively. Rev-erbα acts as a receptor for triiodothyronine and is composed of three domains: a modulating N-terminal domain, a C-terminal steroid binding domain and a DNA-binding domain. Rev-erbβ binds to the sequences 5’-AATGTAGGTCA-3’ and 5’-ATAACTAGGTCA-3’ and acts as a competitive repressor of RORα function. It interacts with NCOA5 co-activator which leads to an increase in transcription. Both Rev-erbα and Rev-erbβ are nuclear proteins belonging to the nuclear hormone receptor family of proteins.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: Nr1d1 (mouse) mapping to 11 D.

**PRODUCT**

Rev-erbα 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 Rev-erbα shRNA Plasmid (m): sc-61459-SH and Rev-erbα shRNA (m) Lentiviral Particles: sc-61459-V as alternate gene silencing products.

For independent verification of Rev-erbα (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-61459A, sc-61459B and sc-61459C.

**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**

Rev-erbα siRNA (m) is recommended for the inhibition of Rev-erbα 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-36888 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescin Conjugated Control siRNAs are available as 10 µM in 68 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-38689, 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**

Rev-erbα [E-12]: sc-393215 is recommended as a control antibody for monitoring of Rev-erbα 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 BP-HRP: sc-516102 or m-IgG 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 BP-FITC: sc-516140 or m-IgG 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 Rev-erbα gene expression knockdown using RT-PCR Primer: Rev-erbα (m)-PR: sc-61459-PR (20 µl). Annealing temperature for the primers should be 55-60°C and the extension temperature should be 68-72°C.

**SELECT PRODUCT CitATIONS**


**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.