SANTA CRUZ BIOTECHNOLOGY, INC.

NR5A2 siRNA (m): sc-37898

BACKGROUND

NR5A2 (nuclear receptor subfamily 5, group A, member 2), also designated B1-binding factor (B1F or B1F2), CYP7A promoter-binding factor (CPF), fetoprotein-α 1 (AFP) transcription factor (FTF, FTZ-F1 or FTZ-F1β) and liver receptor homolog 1 (LRH-1), is a pre-adipocyte-specific nuclear receptor that regulates expression of aromatase in adipose tissue. NR5A2 belongs to the fushi tarazu factor-1 subfamily of orphan nuclear receptors. NR5A2 transcripts are abundant in the human ovary and testis and are predominantly expressed in tissues of endodermal origin. NR5A2 is a positive transcription factor for ABCG5 and ABCG8 and regulates genes involved in sterol and bile acid secretion from liver and intestine. It induces cell proliferation through the concomitant induction of cyclin D1 and E1, an effect that is potentiated by its interaction with β-catenin.

REFERENCES

1. Luo, Y., et al. 2001. The orphan nuclear receptor LRH-1 potentiates the sterol-mediated induction of the human CETP gene by liver X receptor. J. Biol. Chem. 276: 24767-24773.
2. Clyne, C.D., et al. 2002. Liver receptor homologue-1 (LRH-1) regulates expression of aromatase in preadipocytes. J. Biol. Chem. 277: 20591-20597.
3. Bohan, A., et al. 2003. Tumor necrosis factor α-dependent upregulation of LRH-1 and MRP3 (ABCC3) reduces liver injury in obstructive cholestasis. J. Biol. Chem. 278: 36688-36698.
4. Cai, Y.N., et al. 2003. LRH-1/hB1F and HNF1 synergistically upregulate hepatitis B virus gene transcription and DNA replication. Cell Res. 13: 451-458.

CHROMOSOMAL LOCATION

Genetic locus: Nr5a2 (mouse) mapping to 1 E4.

PRODUCT

NR5A2 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 NR5A2 shRNA Plasmid (m): sc-37898-SH and NR5A2 shRNA (m) Lentiviral Particles: sc-37898-V as alternate gene silencing products.

For independent verification of NR5A2 (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-37898A, sc-37898B and sc-37898C.

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

NR5A2 siRNA (m) is recommended for the inhibition of NR5A2 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

NR5A2 (B-8): sc-393369 is recommended as a control antibody for monitoring of NR5A2 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 NR5A2 gene expression knockdown using RT-PCR Primer: NR5A2 (m)-PR: sc-37898-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

1. Li, J., et al. 2018. Protective role of microRNA-219-5p inhibitor against spinal cord injury via liver receptor homolog-1/Wnt/β-catenin signaling pathway regulation. Exp. Ther. Med. 15: 3563-3569.

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.