SANTA CRUZ BIOTECHNOLOGY, INC.

NR5A2 (R-16): sc-21134

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The Power to Question

BACKGROUND

NR5A2 (nuclear receptor subfamily 5, group A, member 2, also designated b1-binding factor (B1F or B1F2), CYP7A promoter-binding factor (CPF), feto-protein-α1 (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 alpha-dependent up-regulation 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 up-regulate hepatitis B virus gene transcription and DNA replication. Cell Res. 13: 451-458.
5. Pezzi, V., et al. 2004. Differential expression of steroidogenic factor-1/adrenal 4 binding protein and liver receptor homolog-1 (LRH-1)/fetoprotein transcription factor in the rat testis: LRH-1 as a potential regulator of testicular aromatase expression. Endocrinology 145: 2186-2196.
6. Clyne, C.D., et al. 2004. Regulation of aromatase expression by the nuclear receptor LRH-1 in adipose tissue. Mol. Cell. Endocrinol. 215: 39-44.
7. Freeman, L.A., et al. 2004. The orphan nuclear receptor LRH-1 activates the ABCG5/ABCG8 intergenic promoter. J. Lipid Res. 45: 1197-1206.
8. Botrugno, O.A., et al. 2004. Synergy between LRH-1 and beta-catenin induces G1 cyclin-mediated cell proliferation. Mol. Cell 15: 499-509.
9. Krylova, I.N., et al. 2005. Structural analyses reveal phosphatidyl inositols as ligands for the NR5 orphan receptors SF-1 and LRH-1. Cell 120: 343-355.

CHROMOSOMAL LOCATION

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

SOURCE

NR5A2 (R-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of NR5A2 of rat origin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21134 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NR5A2 (R-16) is recommended for detection of NR5A2 of rat and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NR5A2 siRNA (m): sc-37898, NR5A2 shRNA Plasmid (m): sc-37898-SH and NR5A2 shRNA (m) Lentiviral Particles: sc-37898-V

Molecular Weight of NR5A2 isoforms: 61/56/42 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Marchand, A., et al. 2004. 2,3,7,8-tetrachlorodibenzo-p-dioxin induces Insulin-like growth factor binding protein-1 gene expression and counteracts the negative effect of Insulin. Mol. Pharmacol. 67: 444-452.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.