SANTA CRUZ BIOTECHNOLOGY, INC.

DHCR7 (H-155): sc-134500

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The Power to Question

BACKGROUND

Dehydrocholesterol reductase (DHCR) proteins are involved in cholesterol biosynthesis. DHCR7, also designated sterol δ-7-reductase or 7-DHC reductase, reduces the C7-C8 double bond of 7-dehydrocholesterol. It is a multi-pass membrane protein localizing to the endoplasmic reticulum (ER). Defects in the DHCR7 gene can cause Smith-Lemli-Opitz syndrome (SLOS), an autosomal recessive disorder of sterol metabolism. DHCR24 acts as a catalyst for the reduction of the δ-24 double bond of sterol intermediates. DHCR24, also designated 3-β-hydroxysterol δ-24-reductase or Seladin-1, binds to FAD and is predominantly expressed in adrenal gland and brain. It is a single-pass membrane protein localizing to the ER or Golgi apparatus. Defects in the DHCR24 gene cause cause the autosomal recessive disorder desmosterolosis.

REFERENCES

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3. Cardoso, M.L., et al. 2005. Molecular studies in Portuguese patients with Smith-Lemli-Opitz syndrome and report of three new mutations in DHCR7. Mol. Genet. Metab. 85: 228-235.
4. Di Stasi, D., et al. 2005. DHCR24 gene expression is upregulated in melanoma metastases and associated to resistance to oxidative stress-induced apoptosis. Int. J. Cancer 115: 224-230.
5. Fuller, P.J., et al. 2005. Seladin-1/DHCR24 expression in normal ovary, ovarian epithelial and granulosa tumours. Clin. Endocrinol. 63: 111-115.
6. Matsumoto, Y., et al. 2005. R352Q mutation of the DHCR7 gene is common among Japanese Smith-Lemli-Opitz syndrome patients. J. Hum. Genet. 50: 353-356.
7. Peri, A., et al. 2005. Seladin-1 as a target of estrogen receptor activation in the brain: a new gene for a rather old story? J. Endocrinol. Invest. 28: 285-293.
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CHROMOSOMAL LOCATION

Genetic locus: DHCR7 (human) mapping to 11q13.4; Dhcr7 (mouse) mapping to 7 F5.

SOURCE

DHCR7 (H-155) is a rabbit polyclonal antibody raised against amino acids 1-155 mapping at the N-terminus of DHCR7 of human origin.

PRODUCT

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

APPLICATIONS

DHCR7 (H-155) is recommended for detection of DHCR7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 DHCR7 siRNA (h): sc-60533, DHCR7 siRNA (m): sc-60534, DHCR7 shRNA Plasmid (h): sc-60533-SH, DHCR7 shRNA Plasmid (m): sc-60534-SH, DHCR7 shRNA (h) Lentiviral Particles: sc-60533-V and DHCR7 shRNA (m) Lentiviral Particles: sc-60534-V.

Molecular Weight of DHCR7: 54 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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