SANTA CRUZ BIOTECHNOLOGY, INC.

DHCR24 (N-15): sc-48475

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dehydrocholesterol reductase proteins (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 DHCR4 gene cause cause the autosomal recessive disorder desmosterolosis.

REFERENCES

1. Wu, C., et al. 2004. Regulation of cellular response to oncogenic and oxidative stress by Seladin-1. Nature 432: 640-645.
2. Alkuraya, F.S., et al. 2005. Smith-Lemli-Opitz syndrome in trisomy 13: how does the mix work? Birth Defects Res. A Clin. Mol. Teratol. 73: 569-571.
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.

CHROMOSOMAL LOCATION

Genetic locus: DHCR24 (human) mapping to 1p32.3; Dhcr24 (mouse) mapping to 4 C7.

SOURCE

DHCR24 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DHCR24 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.

Blocking peptide available for competition studies, sc-48475 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

DHCR24 (N-15) is recommended for detection of DHCR24 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). DHCR24 (N-15) is also recommended for detection of DHCR24 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for DHCR24 siRNA (h): sc-60531, DHCR24 siRNA (m): sc-60532, DHCR24 shRNA Plasmid (h): sc-60531-SH, DHCR24 shRNA Plasmid (m): sc-60532-SH, DHCR24 shRNA (h) Lentiviral Particles: sc-60531-V and DHCR24 shRNA (m) Lentiviral Particles: sc-60532-V.

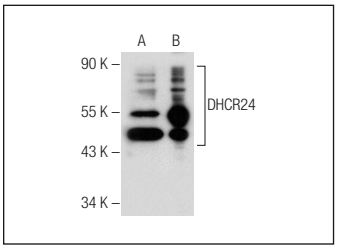
Molecular Weight of DHCR24: 60 kDa.

Positive Controls: human DHCR24 transfected 293T whole cell lysate, A-375 cell lysate: sc-3811 or PC-12 cell lysate: sc-2250.

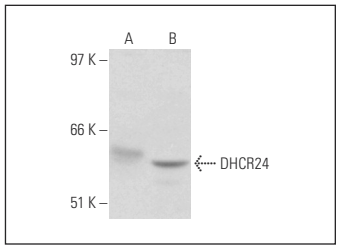
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



DHCR24 (N-15): sc-48475. Western blot analysis of DHCR24 expression in non-transfected (**A**) and human DHCR24 transfected (**B**) 293T whole cell lysates.



DHCR24 (N-15): sc-48475. Western blot analysis of DHCR24 expression in PC-12 (**A**) and A-375 (**B**) whole cell lysates.

RESEARCH USE

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