SANTA CRUZ BIOTECHNOLOGY, INC.

DHCR24 (D-10): sc-390037

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dehydrocholesterol reductase (DHCR) proteins are involved in cholesterol biosynthesis. DHCR7, also designated sterol Delta-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 Delta-24 double bond of sterol intermediates. DHCR24, also designated 3-β-hydroxysterol Delta-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

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. Part A Clin. Mol. Teratol. 73: 569-571.

CHROMOSOMAL LOCATION

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

SOURCE

DHCR24 (D-10) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of DHCR24 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

DHCR24 (D-10) is recommended for detection of DHCR24 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 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.

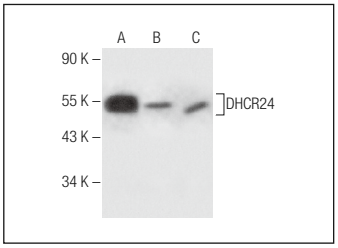
Molecular Weight of DHCR24: 60 kDa.

Positive Controls: A-375 cell lysate: sc-3811 or Hep G2 cell lysate: sc-2227.

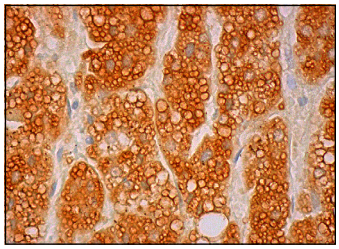
RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



DHCR24 (D-10): sc-390037. Western blot analysis of DHCR24 expression in Hep G2 (**A**), A-375 (**B**) and 293T (**C**) whole cell lysates.



DHCR24 (D-10): sc-390037. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Lim, H.K., et al. 2018. Polyamine regulator AMD1 promotes cell migration in epidermal wound healing. J. Invest. Dermatol. 138: 2653-2665.
2. Simonen, P., et al. 2020. Amiodarone disrupts cholesterol biosynthesis pathway and causes accumulation of circulating desmosterol by inhibiting 24-dehydro-cholesterol reductase. J. Intern. Med. 288: 560-569.

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 for detailed protocols and support products.