

# DHCR24 (D-10): sc-390037

## 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- $\beta$ -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 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  $\mu$ g IgG<sub>1</sub> 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  $\mu$ g per 100-500  $\mu$ g 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.

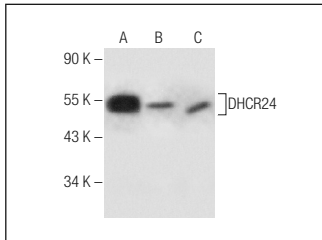
Molecular Weight of DHCR24: 60 kDa.

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

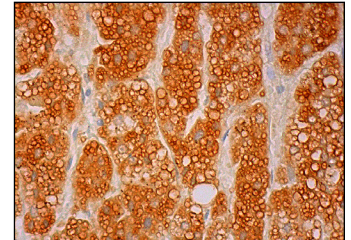
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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-IgG $\kappa$  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](http://www.scbt.com) for detailed protocols and support products.