

# DHCR24 (A-4): sc-398938

## 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. 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. Fuller, P.J., et al. 2005. Seladin-1/DHCR24 expression in normal ovary, ovarian epithelial and granulosa tumours. *Clin. Endocrinol.* 63: 111-115.

## CHROMOSOMAL LOCATION

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

## SOURCE

DHCR24 (A-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 145-166 near the N-terminus of DHCR24 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DHCR24 (A-4) is available conjugated to agarose (sc-398938 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398938 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398938 PE), fluorescein (sc-398938 FITC), Alexa Fluor<sup>®</sup> 488 (sc-398938 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398938 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398938 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398938 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398938 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-398938 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398938 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

DHCR24 (A-4) 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.

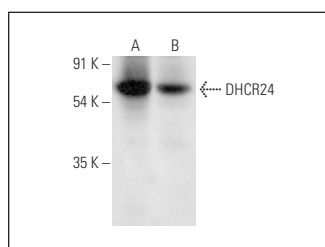
Molecular Weight of DHCR24: 60 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or NIH/3T3 whole cell lysate: sc-2210.

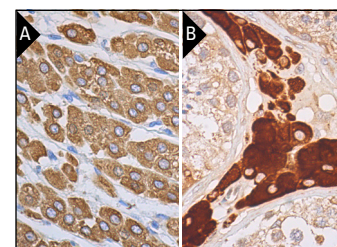
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> 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 (A-4): sc-398938. Western blot analysis of DHCR24 expression in Hep G2 (A) and NIH/3T3 (B) whole cell lysates.



DHCR24 (A-4): sc-398938. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and nuclear staining of Leydig cells (B).

## 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.