

DHCR24 (A-4): sc-398938

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 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.

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 μ g IgG_{2b} 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 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398938 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398938 PE), fluorescein (sc-398938 FITC), Alexa Fluor® 488 (sc-398938 AF488), Alexa Fluor® 546 (sc-398938 AF546), Alexa Fluor® 594 (sc-398938 AF594) or Alexa Fluor® 647 (sc-398938 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398938 AF680) or Alexa Fluor® 790 (sc-398938 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

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RESEARCH USE

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

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 μ g per 100-500 μ 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.

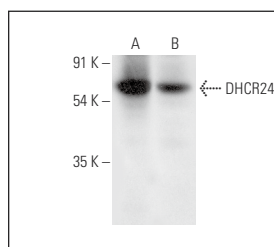
Molecular Weight of DHCR24: 60 kDa.

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

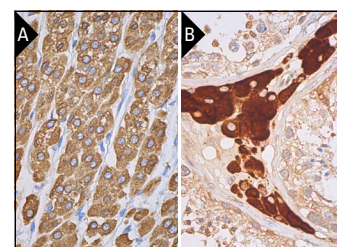
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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 κ 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.