SANTA CRUZ BIOTECHNOLOGY, INC.

NSDHL (D-11): sc-390871

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

NSDHL (NAD(P) dependent steroid dehydrogenase-like), also known as H105E3, XAP104 or SDR31E1, is a 373 amino acid single-pass membrane protein expressed in brain, heart, liver, lung, kidney, skin and placenta. Belonging to the 3-β-HSD family, NSDHL localizes to the endoplasmic reticulum and is involved in cholesterol biosynthesis. NSDHL is thought to be involved in the demethylation of sterol precursors in one of the later steps of cholesterol biosynthesis. Defects in the gene encoding NSDHL causes congenital hemidysplasia with ichthyosiform erythroderma and limb defects (CHILD), which is an X-linked dominant disorder of lipid metabolism with defective cholesterol biosynthesis that usually results in male lethality. CHILD is characterized by congenital hemidysplasia with ichthyosiform erythroderma and ipsilateral hypoplasia of limbs and other parts of the skeleton.

REFERENCES

1. Hummel, M., et al. 2003. Left-sided CHILD syndrome caused by a nonsense mutation in the NSDHL gene. Am. J. Med. Genet. A 122A: 246-251.
2. Caldas, H. and Herman, G.E. 2003. NSDHL, an enzyme involved in cholesterol biosynthesis, traffics through the Golgi and accumulates on ER membranes and on the surface of lipid droplets. Hum. Mol. Genet. 12: 2981-2991.
3. Ohashi, M., et al. 2003. Localization of mammalian NAD(P)H steroid dehydrogenase-like protein on lipid droplets. J. Biol. Chem. 278: 36819-36829.
4. Murata, K., et al. 2003. A unique point mutation in the NSDHL gene in a Japanese patient with CHILD syndrome. J. Dermatol. Sci. 33: 67-69.
5. Mehra, S., et al. 2005. A novel somatic mutation of the 3β-hydroxysteroid dehydrogenase gene in sporadic cutaneous verruciform xanthoma. Arch. Dermatol. 141: 1263-1267.

CHROMOSOMAL LOCATION

Genetic locus: NSDHL (human) mapping to Xq28; Nsdhl (mouse) mapping to X A7.3.

SOURCE

NSDHL (D-11) is a mouse monoclonal antibody raised against amino acids 1-195 mapping at the N-terminus of NSDHL of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NSDHL (D-11) is available conjugated to agarose (sc-390871 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390871 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390871 PE), fluorescein (sc-390871 FITC), Alexa Fluor® 488 (sc-390871 AF488), Alexa Fluor® 546 (sc-390871 AF546), Alexa Fluor® 594 (sc-390871 AF594) or Alexa Fluor® 647 (sc-390871 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390871 AF680) or Alexa Fluor® 790 (sc-390871 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NSDHL (D-11) is recommended for detection of NSDHL 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NSDHL siRNA (h): sc-90849, NSDHL siRNA (m): sc-150073, NSDHL shRNA Plasmid (h): sc-90849-SH, NSDHL shRNA Plasmid (m): sc-150073-SH, NSDHL shRNA (h) Lentiviral Particles: sc-90849-V and NSDHL shRNA (m) Lentiviral Particles: sc-150073-V.

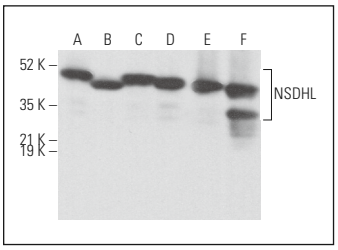
Molecular Weight of NSDHL: 42 kDa.

Positive Controls: NSDHL (m): 293T Lysate: sc-122135, F9 cell lysate: sc-2245 or HeLa whole cell lysate: sc-2200.

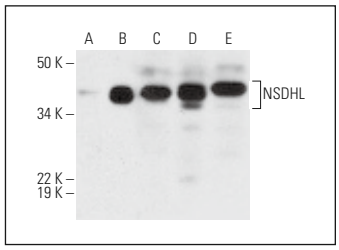
RECOMMENDED SUPPORT REAGENTS

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.

DATA



NSDHL (D-11): sc-390871. Western blot analysis of NSDHL expression in A-431 (**A**), U-251-MG (**B**), MCF7 (**C**) and NIH/3T3 (**D**) whole cell lysates and mouse liver (**E**) and rat liver (**F**) tissue extracts.



NSDHL (D-11): sc-390871. Western blot analysis of NSDHL expression in non-transfected 293T: sc-117752 (**A**), mouse NSDHL transfected 293T: sc-122135 (**B**), F9 (**C**), A-431 (**D**) and HeLa (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Roberts, M.A., et al. 2023. Parallel CRISPR-Cas9 screens identify mechanisms of PLIN2 and lipid droplet regulation. Dev. Cell 58: 1782-1800.e10.

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.