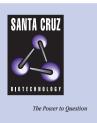
SANTA CRUZ BIOTECHNOLOGY, INC.

ABHD5 (D-21): sc-130934



BACKGROUND

 α/β -hydrolase domains are characterized by a catalytic triad composed of a histidine, an acid and a nucleophile. ABHD5 (α/β -hydrolase domain containing 5), also known as CGI-58, NCIE2 or CDS, is a 349 amino acid protein that contains an α/β -hydrolase domain through which it conveys catalytic function. Localized to the surface of lipid droplets, ABHD5 is widely expressed and interacts with Perilipin on the surface of lipid droplets where it facilitates lipolysis, the breakdown of fat. Defects in the gene encoding ABHD5 are the cause of Chanarin-Dorfman syndrome (CDS), an autosomal recessive inborn error of lipid metabolism with impaired long-chain fatty acid oxidation. CDS symptoms include congenital generalized ichthyosis, vacuolated leukocytes, hepatomegaly, myopathy, cataracts, neurosensory hearing loss and developmental delay.

REFERENCES

- Lefèvre, C., Jobard, F., Caux, F., Bouadjar, B., Karaduman, A., Heilig, R., Lakhdar, H., Wollenberg, A., Verret, J.L., Weissenbach, J., Ozgüc, M., Lathrop, M., Prud'homme, J.F. and Fischer, J. 2001. Mutations in CGI-58, the gene encoding a new protein of the esterase/lipase/thioesterase subfamily, in Chanarin-Dorfman syndrome. Am. J. Hum. Genet. 69: 1002-1012.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604780: World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Schleinitz, N., Fischer, J., Sanchez, A., Veit, V., Harle, J.R. and Pelissier, J.F. 2005. Two new mutations of the ABHD5 gene in a new adult case of Chanarin-Dorfman syndrome: an uncommon lipid storage disease. Arch. Dermatol. 141: 798-800.
- Lass, A., Zimmermann, R., Haemmerle, G., Riederer, M., Schoiswohl, G., Schweiger, M., Kienesberger, P., Strauss, J.G., Gorkiewicz, G. and Zechner, R. 2006. Adipose triglyceride lipase-mediated lipolysis of cellular fat stores is activated by CGI-58 and defective in Chanarin-Dorfman syndrome. Cell Metab. 3: 309-319.
- Ben Selma, Z., Yilmaz, S., Schischmanoff, P.O., Blom, A., Ozogul, C., Laroche, L. and Caux, F. 2007. A novel S115G mutation of CGI-58 in a Turkish patient with Dorfman-Chanarin syndrome. J. Invest. Dermatol. 127: 2273-2276.
- Fischer, J., Negre-Salvayre, A. and Salvayre, R. 2007. Neutral lipid storage diseases and ATGL (adipose triglyceride lipase) and CGI-58/ABHD5 (α-β hydrolase domain-containing 5) deficiency: myopathy, ichthyosis, but no obesity. Med. Sci. 23: 575-578.
- Yamaguchi, T., Omatsu, N., Morimoto, E., Nakashima, H., Ueno, K., Tanaka, T., Satouchi, K., Hirose, F. and Osumi, T. 2007. CGI-58 facilitates lipolysis on lipid droplets but is not involved in the vesiculation of lipid droplets caused by hormonal stimulation. J. Lipid Res. 48: 1078-1089.

CHROMOSOMAL LOCATION

Genetic locus: ABHD5 (human) mapping to 3p21.33; Abhd5 (mouse) mapping to 9 F4.

SOURCE

ABHD5 (D-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic ABHD5 peptide of human origin.

PRODUCT

Each vial contains 100 μg lgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

ABHD5 (D-21) is recommended for detection of ABHD5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ABHD5 siRNA (h): sc-78146, ABHD5 siRNA (m): sc-140773, ABHD5 shRNA Plasmid (h): sc-78146-SH, ABHD5 shRNA Plasmid (m): sc-140773-SH, ABHD5 shRNA (h) Lentiviral Particles: sc-78146-V and ABHD5 shRNA (m) Lentiviral Particles: sc-140773-V.

Molecular Weight of ABHD5: 39 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or ABHD5 (h): 293 Lysate: sc-112234.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

STORAGE

Store at 4° C, **D0 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 or our catalog for detailed protocols and support products.