

ABHD5 (E-1): sc-376931



The Power to Question

BACKGROUND

α/β -hydrolase domains are characterized by a catalytic triad composed of a histidine, an acid and a nucleophile. ABHD5 (abhydrolase 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.

CHROMOSOMAL LOCATION

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

SOURCE

ABHD5 (E-1) is a mouse monoclonal antibody raised against amino acids 179-226 mapping within an internal region of ABHD5 of human origin.

PRODUCT

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

ABHD5 (E-1) is available conjugated to agarose (sc-376931 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376931 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376931 PE), fluorescein (sc-376931 FITC), Alexa Fluor® 488 (sc-376931 AF488), Alexa Fluor® 546 (sc-376931 AF546), Alexa Fluor® 594 (sc-376931 AF594) or Alexa Fluor® 647 (sc-376931 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376931 AF680) or Alexa Fluor® 790 (sc-376931 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ABHD5 (E-1) is recommended for detection of ABHD5 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).

ABHD5 (E-1) is also recommended for detection of ABHD5 in additional species, including equine and canine.

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.

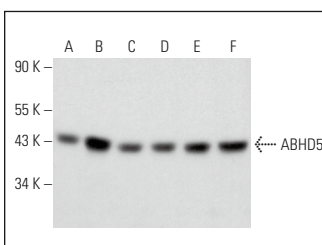
Molecular Weight of ABHD5: 39 kDa.

Positive Controls: JAR cell lysate: sc-2276, C6 whole cell lysate: sc-364373 or Jurkat whole cell lysate: sc-2204.

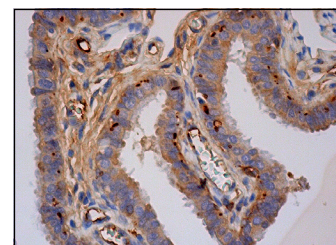
RECOMMENDED SUPPORT REAGENTS

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



ABHD5 (E-1): sc-376931. Western blot analysis of ABHD5 expression in Jurkat (A), JAR (B), 3T3-L1 (C), L929 (D), NRK (E) and C6 (F) whole cell lysates.



ABHD5 (E-1): sc-376931. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Jung, M., et al. 2019. Unified single-cell analysis of testis gene regulation and pathology in five mouse strains. *Elife* 8: e43966.
- Morales, A., et al. 2021. Loss of ephrin B2 receptor (EPHB2) sets lipid rheostat by regulating proteins DGAT1 and ATGL inducing lipid droplet storage in prostate cancer cells. *Lab. Invest.* 101: 921-934.
- Flinkman, D., et al. 2023. Regulators of proteostasis are translationally repressed in fibroblasts from patients with sporadic and LRRK2-G2019S Parkinson's disease. *NPJ Parkinsons Dis.* 9: 20.
- Janikiewicz, J., et al. 2023. Stearoyl-CoA desaturase 1 deficiency exacerbates palmitate-induced lipotoxicity by the formation of small lipid droplets in pancreatic β -cells. *Biochim. Biophys. Acta Mol. Basis Dis.* 1869: 166711.
- Harvey, I. and Stephens, J.M. 2023. An *Artemisia scoparia* extract attenuates glucocorticoid-induced lipolysis in adipocytes. *Obesity* 31: 1859-1870.

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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA