

HADHB (E-1): sc-271495

BACKGROUND

HADHB (trifunctional enzyme subunit β (mitochondrial), Acetyl-CoA acyltransferase) is a 474 amino acid protein encoded by the human gene HADHB. HADHB belong to the thiolase family, which are ubiquitous enzymes that catalyze the reversible thiolytic cleavage of 3-ketoacyl-CoA into acyl-CoA and acetyl-CoA, a 2-step reaction involving a covalent intermediate formed with a catalytic cysteine. HADHB is found in the mitochondrion as an octamer of four α (HADHA) and four β (HADHB) subunits. Defects in HADHB are a cause of trifunctional protein deficiency (TFP deficiency). The clinical manifestations are very variable and include hypoglycemia, cardiomyopathy and sudden death. Phenotypes with mainly hepatic and neuromyopathic involvement can also be distinguished. Biochemically, TFP deficiency is defined by the loss of all three enzyme activities of the TFP complex.

CHROMOSOMAL LOCATION

Genetic locus: HADHB (human) mapping to 2p23.3; Hadhb (mouse) mapping to 5 B1.

SOURCE

HADHB (E-1) is a mouse monoclonal antibody raised against amino acids 1-290 mapping at the N-terminus of HADHB 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.

HADHB (E-1) is available conjugated to agarose (sc-271495 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271495 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271495 PE), fluorescein (sc-271495 FITC), Alexa Fluor[®] 488 (sc-271495 AF488), Alexa Fluor[®] 546 (sc-271495 AF546), Alexa Fluor[®] 594 (sc-271495 AF594) or Alexa Fluor[®] 647 (sc-271495 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271495 AF680) or Alexa Fluor[®] 790 (sc-271495 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

HADHB (E-1) is recommended for detection of HADHB 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 HADHB siRNA (h): sc-62435, HADHB siRNA (m): sc-62436, HADHB shRNA Plasmid (h): sc-62435-SH, HADHB shRNA Plasmid (m): sc-62436-SH, HADHB shRNA (h) Lentiviral Particles: sc-62435-V and HADHB shRNA (m) Lentiviral Particles: sc-62436-V.

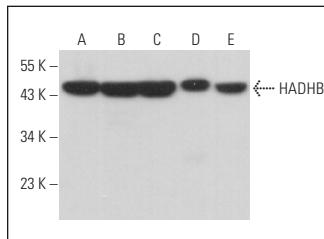
Molecular Weight of HADHB: 52 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, COLO 205 whole cell lysate: sc-364177 or F9 cell lysate: sc-2245.

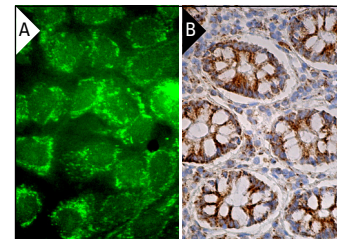
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



HADHB (E-1): sc-271495. Western blot analysis of HADHB expression in Jurkat (A), COLO 205 (B), NCI-H292 (C), 3T3-L1 (D) and F9 (E) whole cell lysates.



HADHB (E-1): sc-271495. Immunofluorescence staining of formalin-fixed A-431 cells showing mitochondrial localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Herrera-Martínez, M., et al. 2013. Actin, RhoA, and Rab11 participation during encystment in *Entamoeba invadens*. Biomed Res. Int. 2013: 919345.
- Xu, W.D., et al. 2015. Up-regulation of fatty acid oxidation in the ligament as a contributing factor of ankylosing spondylitis: a comparative proteomic study. J. Proteomics 113: 57-72.
- Han, S., et al. 2019. CPT1A/2-mediated FAO enhancement—a metabolic target in radioresistant breast cancer. Front. Oncol. 9: 1201.
- Dumbrepatil, A.B., et al. 2020. Targeting viperin to the mitochondrion inhibits the thiolase activity of the trifunctional enzyme complex. J. Biol. Chem. 295: 2839-2849.
- Dang, Y., et al. 2020. Gan-Jiang-Ling-Zhu decoction alleviates hepatic steatosis in rats by the miR-138-5p/CPT1B axis. Biomed. Pharmacother. 127: 110127.
- Nakayama, Y., et al. 2020. A long noncoding RNA regulates inflammation resolution by mouse macrophages through fatty acid oxidation activation. Proc. Natl. Acad. Sci. USA 117: 14365-14375.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.