

ECH1 (B-3): sc-515270

BACKGROUND

ECH1 (enoyl Coenzyme A hydratase 1), also known as HPXEL, is a 328 amino acid protein that localizes to both the mitochondrion and the peroxisome and belongs to the hydratase/isomerase superfamily. Existing as a homohexamer, ECH1 is involved in the fatty acid- β oxidation pathway, specifically functioning to catalyze the isomerization of 3-*trans*,5-*cis*-dienoyl-CoA to 2-*trans*,4-*trans*-dienoyl-CoA. The gene encoding ECH1 maps to human chromosome 19q13.2, which is the genetic home for a number of immunoglobulin superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

REFERENCES

1. FitzPatrick, D.R., et al. 1995. Isolation and characterization of rat and human cDNAs encoding a novel putative peroxisomal enoyl-CoA hydratase. *Genomics* 27: 457-466.
2. Filppula, S.A., et al. 1998. $\Delta^{3,5}\text{-}\Delta^{2,4}$ -dienoyl-CoA isomerase from rat liver. Molecular characterization. *J. Biol. Chem.* 273: 349-355.
3. Davoli, R., et al. 2003. Radiation hybrid mapping of three skeletal muscle genes (CKM, ECH1 and TNNT1) to porcine chromosome 6. *Anim. Genet.* 34: 302-303.
4. Jia, Y., et al. 2003. Overexpression of peroxisome proliferator-activated receptor- α (PPAR α)-regulated genes in liver in the absence of peroxisome proliferation in mice deficient in both L- and D-forms of enoyl-CoA hydratase/dehydrogenase enzymes of peroxisomal β -oxidation system. *J. Biol. Chem.* 278: 47232-47239.

CHROMOSOMAL LOCATION

Genetic locus: ECH1 (human) mapping to 19q13.2; Ech1 (mouse) mapping to 7 A3.

SOURCE

ECH1 (B-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 47-65 near the N-terminus of ECH1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ECH1 (B-3) is available conjugated to agarose (sc-515270 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515270 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515270 PE), fluorescein (sc-515270 FITC), Alexa Fluor[®] 488 (sc-515270 AF488), Alexa Fluor[®] 546 (sc-515270 AF546), Alexa Fluor[®] 594 (sc-515270 AF594) or Alexa Fluor[®] 647 (sc-515270 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515270 AF680) or Alexa Fluor[®] 790 (sc-515270 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515270 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

ECH1 (B-3) is recommended for detection of ECH1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ECH1 siRNA (h): sc-97427, ECH1 siRNA (m): sc-143282, ECH1 shRNA Plasmid (h): sc-97427-SH, ECH1 shRNA Plasmid (m): sc-143282-SH, ECH1 shRNA (h) Lentiviral Particles: sc-97427-V and ECH1 shRNA (m) Lentiviral Particles: sc-143282-V.

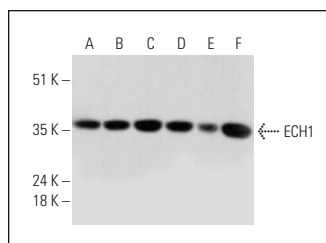
Molecular Weight of ECH1 monomer: 35 kDa.

Positive Controls: A549 cell lysate: sc-2413, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

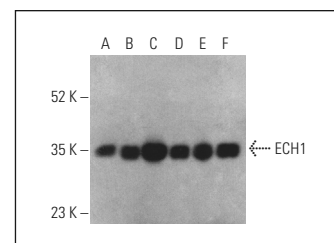
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-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.

DATA



ECH1 (B-3): sc-515270. Western blot analysis of ECH1 expression in Hep G2 (A), HeLa (B), A549 (C) and Jurkat (D) whole cell lysates and human pancreas (E) and human liver (F) tissue extracts.



ECH1 (B-3) HRP: sc-515270 HRP. Direct western blot analysis of ECH1 expression in HeLa (A), Jurkat (B), OVCA-3 (C), MIA PaCa-2 (D), THP-1 (E) and A549 (F) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wang, W., et al. 2017. TRIM37, a novel E3 ligase for PEX5-mediated peroxisomal matrix protein import. *J. Cell Biol.* 216: 2843-2858.

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.