SANTA CRUZ BIOTECHNOLOGY, INC.

ECH1 (T-22): sc-133532

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 19, 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., Germain-Lee, E. and Valle, D. 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., Yagi, A.I., Kilpeläinen, S.H., Novikov, D., FitzPatrick, D.R., Vihinen, M., Valle, D. and Hiltunen, J.K. 1998. $\Delta^{3,5}$-$\Delta^{2,4}$-dienoyl-CoA isomerase from rat liver. Molecular characterization. J. Biol. Chem. 273: 349-355.
3. Davoli, R., Zambonelli, P., Fontanesi, L., Cagnazzo, M., Bigi, D., Russo, V. and Milan, D. 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., Qi, C., Zhang, Z., Hashimoto, T., Rao, M.S., Huyghe, S., Suzuki, Y., Van Veldhoven, P.P., Baes, M. and Reddy, J.K. 2003. Overexpression of peroxisome proliferator-activated receptor-α (PPARα)-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.
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CHROMOSOMAL LOCATION

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

SOURCE

ECH1 (T-22) is a Protein A purified rabbit polyclonal antibody raised against synthetic ECH1 peptide of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

ECH1 (T-22) is recommended for detection of ECH1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 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.

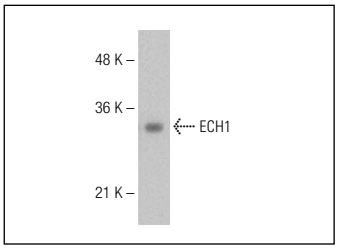
Molecular Weight of ECH1 monomer: 35 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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).

DATA



ECH1 (T-22): sc-133532. Western blot analysis of ECH1 expression in Hep G2 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Huang, Z., Ichihara, S., Oikawa, S., Chang, J., Zhang, L., Takahashi, M., Subramanian, K., Mohideen, S.S., Wang, Y. and Ichihara, G. 2011. Proteomic analysis of hippocampal proteins of F344 rats exposed to 1-bromopropane. Toxicol. Appl. Pharmacol. 257: 93-101.

RESEARCH USE

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