SANTA CRUZ BIOTECHNOLOGY, INC.

ECH1 (L-13): sc-167710

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

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2. Filppula, S.A., et al. 1998. δ3,5-δ2,4-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 (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.
5. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 600696. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Kovalyov, L.I., et al. 2006. Polymorphism of δ3,5-δ2,4-dienoyl-coenzyme A isomerase (the ECH1 gene product protein) in human striated muscle tissue. Biochemistry 71: 448-453.
7. de Boer, V.C., et al. 2006. Chronic quercetin exposure affects fatty acid catabolism in rat lung. Cell. Mol. Life Sci. 63: 2847-2858.

CHROMOSOMAL LOCATION

Genetic locus: ECH1 (human) mapping to 19q13.2.

SOURCE

ECH1 (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ECH1 of human origin.

STORAGE

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

PROTOCOLS

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167710 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ECH1 (L-13) is recommended for detection of ECH1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ECH1 (L-13) is also recommended for detection of ECH1 in additional species, including equine and porcine.

Suitable for use as control antibody for ECH1 siRNA (h): sc-97427, ECH1 shRNA Plasmid (h): sc-97427-SH and ECH1 shRNA (h) Lentiviral Particles: sc-97427-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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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