

# ECH1 (S-15): sc-167713

## 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- $\beta$  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.  $\Delta^{3,5}$ - $\Delta^{2,4}$ -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- $\alpha$  (PPAR $\alpha$ )-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  $\beta$ -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  $\Delta^{3,5}$ - $\Delta^{2,4}$ -dienoyl-coenzyme A isomerase (the ECH1 gene product protein) in human striated muscle tissue. *Biochemistry Mosc.* 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 (mouse) mapping to 7 A3.

## SOURCE

ECH1 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ECH1 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167713 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

CH1 (S-15) is recommended for detection of ECH1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 (m): sc-143282, ECH1 shRNA Plasmid (m): sc-143282-SH and ECH1 shRNA (m) Lentiviral Particles: sc-143282-V.

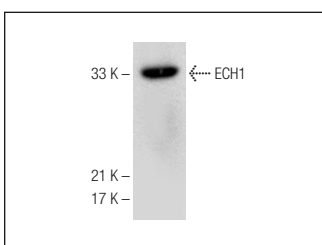
Molecular Weight of ECH1 monomer: 35 kDa.

Positive Controls: mouse pancreas extract: sc-364244.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



ECH1 (S-15): sc-167713. Western blot analysis of ECH1 expression in mouse pancreas tissue extract.

## STORAGE

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



Try **ECH1 (B-3): sc-515270**, our highly recommended monoclonal alternative to ECH1 (S-15).