

PECI (32): sc-136374

BACKGROUND

PECI (peroxisomal Δ^3, Δ^2 -enoyl-CoA isomerase), also known as DRS1, ACBD2 or HCA88, is a 359 amino acid protein that localizes to the peroxisomal matrix and contains one ACB (acyl-CoA-binding) domain. Expressed abundantly in liver, heart and skeletal muscle, PECI functions to catalyze the isomerization of both 3-*cis* and 3-*trans* double bonds into the 2-*trans* form in a range of enoyl-CoA species, playing an important role in the β -oxidation of unsaturated fatty acids. The gene encoding PECI maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

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- Suk, K., et al. 1999. Molecular cloning and expression of a novel human cDNA related to the diazepam binding inhibitor. *Biochim. Biophys. Acta* 1454: 126-131.
- Geisbrecht, B.V., et al. 1999. Characterization of PECI, a novel monofunctional Δ^3, Δ^2 -enoyl-CoA isomerase of mammalian peroxisomes. *J. Biol. Chem.* 274: 21797-21803.
- Janssen, U. and Stoffel, W. 2002. Disruption of mitochondrial β -oxidation of unsaturated fatty acids in the 3,2-*trans*-enoyl-CoA isomerase-deficient mouse. *J. Biol. Chem.* 277: 19579-19584.
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- McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. *Am. J. Hum. Genet.* 77: 582-595.

CHROMOSOMAL LOCATION

Genetic locus: EC12 (human) mapping to 6p25.2; Eci2 (mouse) mapping to 13 A3.3.

SOURCE

PECI (32) is a mouse monoclonal antibody raised against amino acids 1-103 of PECI Isoform 2 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.

PECI (32) is available conjugated to agarose (sc-136374 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; and to HRP (sc-136374 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA.

APPLICATIONS

PECI (32) is recommended for detection of PECI of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for PECI siRNA (h): sc-76104, PECI siRNA (m): sc-76105, PECI shRNA Plasmid (h): sc-76104-SH, PECI shRNA Plasmid (m): sc-76105-SH, PECI shRNA (h) Lentiviral Particles: sc-76104-V and PECI shRNA (m) Lentiviral Particles: sc-76105-V.

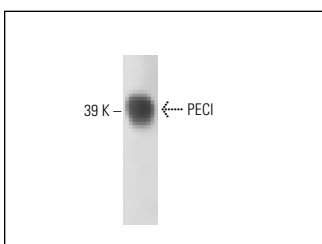
Molecular Weight of PECI: 39 kDa.

Positive Controls: rat liver extract: sc-2395 or human liver extract: sc-363766.

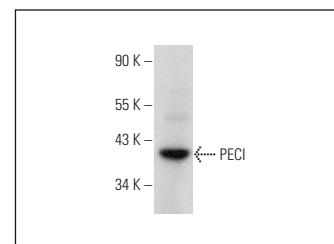
RECOMMENDED SUPPORT REAGENTS

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



PECI (32): sc-136374. Western blot analysis of PECI isoform 2 expression in rat liver tissue extract.



PECI (32): sc-136374. Western blot analysis of PECI expression in human liver tissue extract.

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.

PROTOCOLS

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