

ACADS (H-141): sc-135342

BACKGROUND

ACADS (acyl-Coenzyme A dehydrogenase, C-2 to C-3 short chain), also known as SCAD or ACAD3, is a 412 amino acid homotetrameric mitochondrial flavo-protein that belongs to the acyl-CoA dehydrogenase family. ACADS catalyzes the rate-limiting step of the mitochondrial fatty acid β -oxidation pathway. Mutations of ACADS have been associated with fatty acid oxidation defects and metabolic diseases such as short-chain acyl-CoA dehydrogenase deficiency (SCAD deficiency), an autosomal recessive disorder resulting in acute acidosis and muscle weakness in infants and lipid-storage myopathy in adults. SCADS leads to the accumulation of butyrylcarnitine and ethylmalonic acid in blood and urine. ACADS contains four FAD domains.

REFERENCES

1. Corydon, M.J., et al. 1997. Structural organization of the human short-chain acyl-CoA dehydrogenase gene. *Mamm. Genome* 8: 922-926.
2. Tafti, M., et al. 2003. Deficiency in short-chain fatty acid β -oxidation affects θ oscillations during sleep. *Nat. Genet.* 34: 320-325.
3. Nasser, I., et al. 2004. Thermal unfolding of medium-chain acyl-CoA dehydrogenase and iso(3)valeryl-CoA dehydrogenase: study of the effect of genetic defects on enzyme stability. *Biochim. Biophys. Acta* 1690: 22-32.

CHROMOSOMAL LOCATION

Genetic locus: ACADS (human) mapping to 12q24.31; Acads (mouse) mapping to 5 F.

SOURCE

ACADS (H-141) is a rabbit polyclonal antibody raised against amino acids 104-244 mapping within an internal region of ACADS of human origin.

PRODUCT

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

APPLICATIONS

ACADS (H-141) is recommended for detection of ACADS 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)], 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); non cross-reactive with other ACAD family members.

ACADS (H-141) is also recommended for detection of ACADS in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ACADS siRNA (h): sc-96082, ACADS siRNA (m): sc-140792, ACADS shRNA Plasmid (h): sc-96082-SH, ACADS shRNA Plasmid (m): sc-140792-SH, ACADS shRNA (h) Lentiviral Particles: sc-96082-V and ACADS shRNA (m) Lentiviral Particles: sc-140792-V.

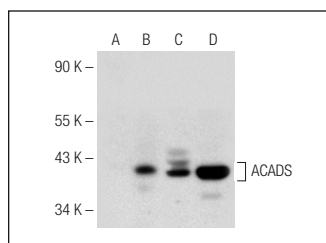
Molecular Weight of ACADS: 42 kDa.

Positive Controls: ACADS (m): 293T Lysate: sc-118186.

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



ACADS (H-141): sc-135342. Western blot analysis of ACADS expression in non-transfected 293T: sc-117752 (A), human ACADS transfected 293T: sc-170175 (B) and Hep G2 (C) whole cell lysates and mouse kidney tissue extract (D).

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **ACADS (G-10): sc-365953** or **ACADS (B-8): sc-365648**, our highly recommended monoclonal alternatives to ACADS (H-141).