

ACN9 (L-15): sc-163626

BACKGROUND

ACN9 (CN9 homolog (*S. cerevisiae*)), also known as protein ACN9 homolog, mitochondrial, is a 125 amino acid protein belonging to the ACN9 family. ACN9 homologs exist in human, mouse, and nematode. Encoded by a gene that maps to human chromosome 7q21.3, ACN9 participates in gluconeogenesis regulation and ethanol or acetate assimilation into carbohydrate. ACN9 also functions in activities related to the overexpression of oxidative enzymes, such as glyoxylate cycle activity and acetyl-coA metabolism. Localizing to the mitochondrial intermembrane space, ACN9 expression can be slightly repressed by glucose. ACN9 may play a role in predisposition to alcohol dependence and may be linked to early-onset breast cancer.

REFERENCES

- Whitford, M., et al. 1989. Identification and sequence analysis of a gene encoding gp67, an abundant envelope glycoprotein of the baculovirus *Autographa californica* nuclear polyhedrosis virus. *J. Virol.* 63: 1393-1399.
- McCammon, M.T. 1996. Mutants of *Saccharomyces cerevisiae* with defects in acetate metabolism: isolation and characterization of Acn- mutants. *Genetics* 144: 57-69.
- Collier, L.S., et al. 1998. Regulation of benzoate degradation in *Acinetobacter* sp. strain ADP1 by BenM, a LysR-type transcriptional activator. *J. Bacteriol.* 180: 2493-2501.
- Dennis, R.A., et al. 1999. Acn9 is a novel protein of gluconeogenesis that is located in the mitochondrial intermembrane space. *Eur. J. Biochem.* 261: 236-243.
- Nishizawa, M., et al. 2004. Yeast Pho85 kinase is required for proper gene expression during the diauxic shift. *Yeast* 21: 903-918.
- Reinders, J., et al. 2006. Toward the complete yeast mitochondrial proteome: multidimensional separation techniques for mitochondrial proteomics. *J. Proteome Res.* 5: 1543-1554.
- Dick, D.M., et al. 2008. A systematic single nucleotide polymorphism screen to fine-map alcohol dependence genes on chromosome 7 identifies association with a novel susceptibility gene ACN9. *Biol. Psychiatry* 63: 1047-1053.
- Kibriya, M.G., et al. 2009. A pilot genome-wide association study of early-onset breast cancer. *Breast Cancer Res. Treat.* 114: 463-477.

CHROMOSOMAL LOCATION

Genetic locus: ACN9 (human) mapping to 7q21.3; Acn9 (mouse) mapping to 6 A1.

SOURCE

ACN9 (L-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ACN9 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.

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-163626 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ACN9 (L-15) is recommended for detection of ACN9 of mouse, rat and 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).

ACN9 (L-15) is also recommended for detection of ACN9 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for ACN9 siRNA (h): sc-89725, ACN9 siRNA (m): sc-140810, ACN9 shRNA Plasmid (h): sc-89725-SH, ACN9 shRNA Plasmid (m): sc-140810-SH, ACN9 shRNA (h) Lentiviral Particles: sc-89725-V and ACN9 shRNA (m) Lentiviral Particles: sc-140810-V.

Molecular Weight of ACN9: 16 kDa.

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.

PROTOCOLS

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