SANTA CRUZ BIOTECHNOLOGY, INC.

ACSM3 (G-8): sc-377173

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The acyl-CoA synthetase medium-chain (ACSM) family is comprised of ACSM1, ACSM2A, ACSM2B, ACSM3, ACSM4 and ACSM5, which encode for enzymes catalyzing the activation of medium-chain length fatty acids. ACSM3 is a 586 amino acid protein has a broad substrate specificity and utilizes magnesium as a cofactor. The gene encoding ACSM3 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Ben Hamida, C., et al. 1997. Homozygosity mapping of giant axonal neuropathy gene to chromosome 16q24.1. Neurogenetics 1: 129-133.
2. Karlsson, J., et al. 2003. Novel quantitative trait loci controlling development of experimental autoimmune encephalomyelitis and proportion of lymphocyte subpopulations. J. Immunol. 170: 1019-1026.
3. Forabosco, P., et al. 2006. Meta-analysis of genome-wide linkage studies of systemic lupus erythematosus. Genes Immun. 7: 609-614.
4. Carneiro, L.A., et al. 2007. Nod-like receptors in innate immunity and inflammatory diseases. Ann. Med. 39: 581-593.
5. King, K., et al. 2007. Identification, evolution, and association study of a novel promoter and first exon of the human NOD2 (CARD15) gene. Genomics 90: 493-501.

CHROMOSOMAL LOCATION

Genetic locus: ACSM3 (human) mapping to 16p12.3; Acsm3 (mouse) mapping to 7 F2.

SOURCE

ACSM3 (G-8) is a mouse monoclonal antibody raised against amino acids 1-50 mapping at the N-terminus of ACSM3 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ACSM3 (G-8) is available conjugated to agarose (sc-377173 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377173 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377173 PE), fluorescein (sc-377173 FITC), Alexa Fluor® 488 (sc-377173 AF488), Alexa Fluor® 546 (sc-377173 AF546), Alexa Fluor® 594 (sc-377173 AF594) or Alexa Fluor® 647 (sc-377173 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377173 AF680) or Alexa Fluor® 790 (sc-377173 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ACSM3 (G-8) is recommended for detection of ACSM3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 ACSM3 siRNA (h): sc-93546, ACSM3 siRNA (m): sc-140831, ACSM3 shRNA Plasmid (h): sc-93546-SH, ACSM3 shRNA Plasmid (m): sc-140831-SH, ACSM3 shRNA (h) Lentiviral Particles: sc-93546-V and ACSM3 shRNA (m) Lentiviral Particles: sc-140831-V.

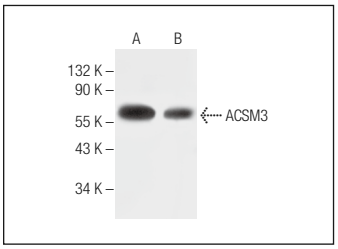
Molecular Weight of ACSM3 isoform 1/2: 66/49 kDa.

Positive Controls: A549 cell lysate: sc-2413 or OV-90 whole cell lysate: sc-364191.

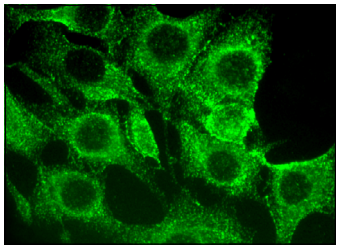
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



ACSM3 (G-8): sc-377173. Western blot analysis of ACSM3 expression in A549 (**A**) and OV-90 (**B**) whole cell lysates.



ACSM3 (G-8): sc-377173. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Shu, C., et al. 2022. Acquisition of taxane resistance by p53 inactivation in ovarian cancer cells. Acta Pharmacol. Sin. 43: 2419-2428.

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.