SANTA CRUZ BIOTECHNOLOGY, INC.

cHMGCS (H-70): sc-33829

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

HMG-CoA Synthase exists as both a mitochondrial (mHMGCS) and cytoplasmic (cHMGCS) enzyme that condenses acetyl-CoA with acetoacetyl-CoA to form HMG-CoA. The HMG-CoA produced by cHMGCS is transformed into mevalonate by HMG-CoA reductase, which starts isoprenoid biosynthesis. End products of the isoprenoid pathway include cholesterol, ubiquinone, dolichol, isopentenyl adenosine and farnesyl groups. mHMGCS, together with HMG-CoA Lyase, is responsible for ketone body biosynthesis. mHMGCS is expressed in liver and kidney. Fasting, cAMP and fatty acids increase the level of transcription of mHMGCS, while feeding and Insulin repress it. A regulatory element within the mHMGCS promoter confers transcriptional regulation by PPAR, RXR, COUP-TF and HNF-4.

CHROMOSOMAL LOCATION

Genetic locus: HMGCS1 (human) mapping to 5p12; Hmgcs1 (mouse) mapping to 13.

SOURCE

cHMGCS (H-70) is a rabbit polyclonal antibody raised against amino acids 381-450 mapping near the C-terminus of cHMGCS of human origin.

PRODUCT

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

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.

APPLICATIONS

cHMGCS (H-70) is recommended for detection of cytoplasmic HMG-CoA Synthase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

cHMGCS (H-70) is also recommended for detection of cHMGCS in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for cHMGCS siRNA (h): sc-44506, cHMGCS siRNA (m): sc-44507, cHMGCS shRNA Plasmid (h): sc-44506-SH, cHMGCS shRNA Plasmid (m): sc-44507-SH, cHMGCS shRNA (h) Lentiviral Particles: sc-44506-V and cHMGCS shRNA (m) Lentiviral Particles: sc-44507-V.

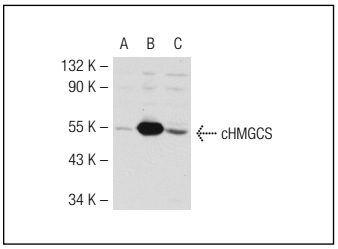
Molecular Weight of cHMGCS: 65 kDa.

Positive Controls: cHMGCS (m4): 293T Lysate: sc-119234, Hep G2 cell lysate: sc-2227 or rat liver extract: sc-2395.

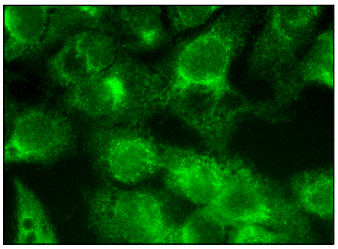
RECOMMENDED SECONDARY REAGENTS

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



cHMGCS (H-70): sc-33829. Western blot analysis of cHMGCS expression in non-transfected 293T: sc-117752 (**A**), mouse cHMGCS transfected 293T: sc-119234 (**B**) and Hep G2 (**C**) whole cell lysates.



cHMGCS (H-70): sc-33829. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Roth, U., et al. 2010. Differential expression proteomics of human colorectal cancer based on a syngeneic cellular model for the progression of adenoma to carcinoma. Int. J. Proteomics 10: 194-202.
2. Chiavarina, B., et al. 2011. Pyruvate kinase expression (PKM1 and PKM2) in cancer-associated fibroblasts drives stromal nutrient production and tumor growth. Cancer Biol. Ther. 12: 1101-1113.
3. Sanchez-Alvarez, R., et al. 2013. Ethanol exposure induces the cancer-associated fibroblast phenotype and lethal tumor metabolism: implications for breast cancer prevention. Cell Cycle 12: 289-301.
4. McIntosh, A.L., et al. 2013. Liver fatty acid binding protein gene-ablation exacerbates weight gain in high-fat fed female mice. Lipids 48: 435-448.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **cHMGCS (A-6): sc-166763** or **cHMGCS (C-8): sc-271543**, our highly recommended monoclonal alternatives to cHMGCS (H-70).