

# mHMGCS (H-70): sc-33828

## 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: HMGCS2 (human) mapping to 1p12; Hmgcs2 (mouse) mapping to 3 F2.2.

## SOURCE

mHMGCS (H-70) is a rabbit polyclonal antibody raised against amino acids 419-488 mapping near the C-terminus of mHMGCS 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.

## APPLICATIONS

mHMGCS (H-70) is recommended for detection of mitochondrial 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).

mHMGCS (H-70) is also recommended for detection of mitochondrial HMG-CoA Synthase in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for mHMGCS siRNA (h): sc-44503, mHMGCS siRNA (m): sc-44502, mHMGCS shRNA Plasmid (h): sc-44503-SH, mHMGCS shRNA Plasmid (m): sc-44502-SH, mHMGCS shRNA (h) Lentiviral Particles: sc-44503-V and mHMGCS shRNA (m) Lentiviral Particles: sc-44502-V.

Molecular Weight (predicted) of mHMGCS: 57 kDa.

Molecular Weight (observed) of mHMGCS: 47-67 kDa.

Positive Controls: mHMGCS (m): 293T Lysate: sc-121640, mouse liver extract: sc-2256 or human liver extract: sc-363766.

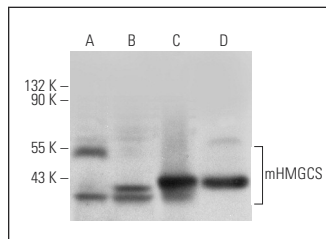
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

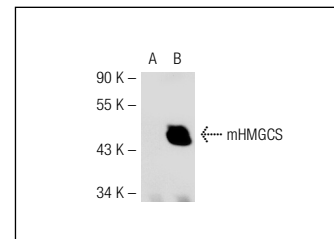
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



mHMGCS (H-70): sc-33828. Western blot analysis of mHMGCS expression in Hep G2 (A) and Caco-2 (B) whole cell lysates and human liver (C) and mouse liver (D) tissue extracts.



mHMGCS (H-70): sc-33828. Western blot analysis of mHMGCS expression in non-transfected: sc-117752 (A) and mouse mHMGCS transfected: sc-121640 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Vila-Brau, A., et al. 2011. Human HMGCS2 regulates mitochondrial fatty acid oxidation and FGF21 expression in HepG2 cell line. *J. Biol. Chem.* 286: 20423-20430.
- 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.
- 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **mHMGCS (B-8): sc-393256** or **mHMGCS (G-11): sc-376092**, our highly recommended monoclonal alternatives to mHMGCS (H-70).