**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 (B-8) is a mouse monoclonal antibody raised against amino acids 419-488 mapping near the C-terminus of mHMGCS of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

mHMGCS (B-8) is available conjugated to agarose (sc-393256 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393256 HRP), 200 µg/ml, for WB, HRP and ELISA; to either phycoerythrin (sc-393256 PE), fluorescein (sc-393256 FITC), Alexa Fluor® 488 (sc-393256 AF488), Alexa Fluor® 546 (sc-393256 AF546), Alexa Fluor® 594 (sc-393256 AF594) or Alexa Fluor® 647 (sc-393256 AF647), 200 µg/ml, for WB (RGB), IF, HRP and IF, and to either Alexa Fluor® 680 (sc-393256 AF680) or Alexa Fluor® 790 (sc-393256 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

**APPLICATIONS**

mHMGCS (B-8) is recommended for detection of mHMGCS 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:100, dilution range 1:30-1:3000).

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-383766.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG κBP-HRP: sc-516102 or m-IgG κBP-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).


**DATA**

**SELECT PRODUCT CITATIONS**


**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 for detailed protocols and support products.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA