

ME1 (H-47): sc-135303

BACKGROUND

ME1 (Malic enzyme 1), also known as NADP-ME, MES or HUMNDME, is a 572 amino acid cytoplasmic protein that belongs to the malic enzyme family. Expressed ubiquitously with highest expression in liver and white adipose tissue, ME1 functions as an NADP-dependent enzyme that catalyzes the conversion of S-malate and NADP to pyruvate, carbon dioxide and NADPH (a reducing agent that participates in fatty acid biosynthesis). Through its ability to catalyze the reversible oxidative decarboxylation of malate, ME1 links the citric acid and glycolytic cycles. ME1 exists as a homotetramer that uses divalent metal cations, such as magnesium or manganese, as cofactors. The expression of ME1 is regulated by both thyroid hormone levels and the amount of carbohydrates in the diet, indicating that ME1 may play an important role as a housekeeping protein within the cell.

REFERENCES

1. Tessarolo, D., et al. 1991. Human malic enzymes in heart and muscle: evidence of a selective distribution. *Biochem. Med. Metab. Biol.* 45: 1-5.
2. Loeber, G., et al. 1994. Characterization of cytosolic malic enzyme in human tumor cells. *FEBS Lett.* 344: 181-186.

CHROMOSOMAL LOCATION

Genetic locus: ME1 (human) mapping to 6q14.2; Me1 (mouse) mapping to 9 E3.1.

SOURCE

ME1 (H-47) is a rabbit polyclonal antibody raised against amino acids 34-80 mapping near the N-terminus of ME1 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

ME1 (H-47) is recommended for detection of ME1 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).

ME1 (H-47) is also recommended for detection of ME1 in additional species, including bovine and porcine.

Suitable for use as control antibody for ME1 siRNA (h): sc-95470, ME1 siRNA (m): sc-149342, ME1 shRNA Plasmid (h): sc-95470-SH, ME1 shRNA Plasmid (m): sc-149342-SH, ME1 shRNA (h) Lentiviral Particles: sc-95470-V and ME1 shRNA (m) Lentiviral Particles: sc-149342-V.

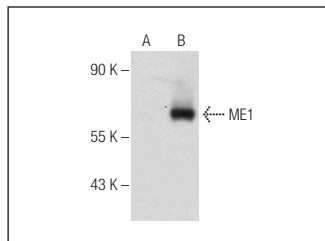
Molecular Weight of ME1: 64 kDa.

Positive Controls: ME1 (m2): 293T Lysate: sc-121576, mouse liver extract: sc-2256 or Hep G2 cell lysate: sc-2227.

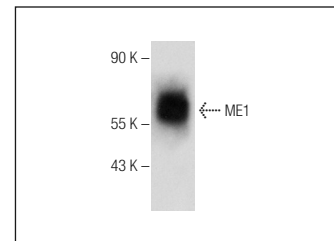
RECOMMENDED SECONDARY REAGENTS

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



ME1 (H-47): sc-135303. Western blot analysis of ME1 expression in non-transfected: sc-117752 (A) and mouse ME1 transfected: sc-121576 (B) 293T whole cell lysates.



ME1 (H-47): sc-135303. Western blot analysis of ME1 expression in mouse liver tissue extract.

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 or our catalog for detailed protocols and support products.


 MONOS
Satisfation
Guaranteed

Try **ME1 (C-6): sc-365891** or **ME1 (99.1): sc-100569**, our highly recommended monoclonal alternatives to ME1 (H-47).