

## ME2 (N-14): sc-85052

### BACKGROUND

ME2, malic enzyme 2, is a mitochondrial NAD-dependent malic enzyme. Found as a homotetramer, the main function of ME2 is to catalyze the anaplerotic reaction yielding pyruvate from (s)-malate. One single-nucleotide polymorphism of the ME2 gene has been associated with a phenotype manifested as psychosis. ME2 directly interacts with the malate shuttle system and has roles in neuronal synthesis of glutamate and gamma-amino butyric acid. This system has been shown to be altered in schizophrenia and bipolar disorder, which is also characterized by forms of epilepsy brought on by the role ME2 on ion channels in the brain.

### REFERENCES

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2. Lenzen, K.P., Heils, A., Lorenz, S., Hempelmann, A. and Sander, T. 2005. Association analysis of malic enzyme 2 gene polymorphisms with idiopathic generalized epilepsy. *Epilepsia* 46: 1637-1641.
3. Gardiner, M. 2005. Genetics of idiopathic generalized epilepsies. *Epilepsia* 46: 15-20.
4. Turnbull, J., Lohi, H., Kearney, J.A., Rouleau, G.A., Delgado-Escueta, A.V., Meisler, M.H., Cossette, P. and Minassian, B.A. 2005. Sacred disease secrets revealed: the genetics of human epilepsy. *Hum. Mol. Genet.* 14: 2491-2500.
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### CHROMOSOMAL LOCATION

Genetic locus: ME2 (human) mapping to 18q21.2; Me2 (mouse) mapping to 18 E2.

### SOURCE

ME2 (N-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of ME2 of human origin.

### PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85052 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### RESEARCH USE

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

### APPLICATIONS

ME2 (N-14) is recommended for detection of ME2 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).

ME2 (N-14) is also recommended for detection of ME2 in additional species, including equine, canine, bovine and porcine.

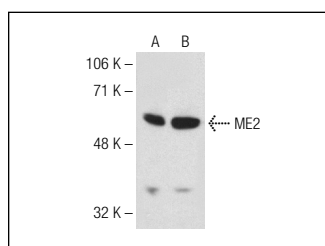
Suitable for use as control antibody for ME2 siRNA (h): sc-75764, ME2 siRNA (m): sc-149343, ME2 shRNA Plasmid (h): sc-75764-SH, ME2 shRNA Plasmid (m): sc-149343-SH, ME2 shRNA (h) Lentiviral Particles: sc-75764-V and ME2 shRNA (m) Lentiviral Particles: sc-149343-V.

Molecular Weight of ME2: 65 kDa.

### 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



ME2 (N-14): sc-85052. Western blot analysis of ME2 expression in 293T (A) and BJAB (B) whole cell lysates.

### STORAGE

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

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Try **ME2 (F-5): sc-514850**, our highly recommended monoclonal alternative to ME2 (N-14).