10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# ME1 Antibody
**Catalog # ASC11773**

## Specification

### ME1 Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC** |
| Primary Accession | P48163 |
| Other Accession | NP_002386, 4505143 |
| Reactivity | **Human, Mouse, Rat** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **IgG** |
| Calculated MW | **Predicted: 63 kDa**<br><br>**Observed: 63 kDa KDa** |
| Application Notes | **ME1 antibody can be used for detection of ME1 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry at 5 µg/mL.** |

### ME1 Antibody - Additional Information

Gene ID **4199**

**Target/Specificity**
ME1; ME1 antibody is human, mouse and rat reactive. ME1 antibody is predicted not to cross-react with ME2.

**Reconstitution & Storage**
ME1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.

**Precautions**
ME1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

### ME1 Antibody - Protein Information

**Name** ME1 (HGNC:6983)

**Function**
Catalyzes the oxidative decarboxylation of (S)-malate in the presence of NADP(+) and divalent metal ions, and decarboxylation of oxaloacetate.

**Cellular Location**
Cytoplasm.

**Tissue Location**
Expressed in all tissues tested including liver, placenta and white adipose tissue.

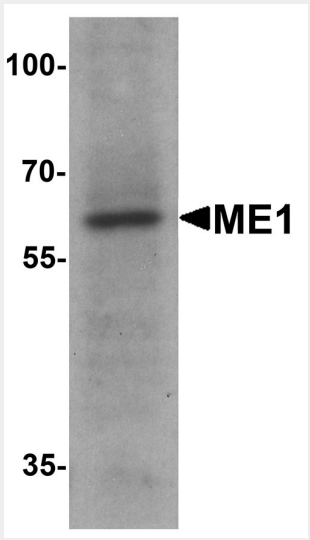
10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

## ME1 Antibody - Protocols

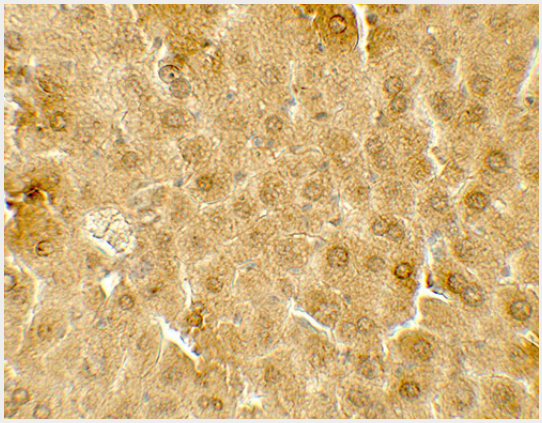
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## ME1 Antibody - Images




Western blot analysis of ME1 in 293 cell lysate with ME1 antibody at 1 µg/ml.



Immunohistochemistry of ME1 in mouse liver tissue with ME1 antibody at 5 µg/mL.

## ME1 Antibody - Background

ME1, also known as NADP-ME, MES or HUMNDME, may play an important role as a housekeeping protein within the cell (1). ME1 is a 572 amino acid cytoplasmic protein that belongs to the malic enzyme family (2). It is expressed ubiquitously with highest expression in liver and white adipose tissue. ME1 functions as an NADP-dependent enzyme that generates NADPH for fatty acid

biosynthesis (3). The activity of this enzyme, the reversible oxidative decarboxylation of malate, links the glycolytic and citric acid cycles (3,4). ME1 is regulated by both thyroid hormone levels and the amount of carbohydrates in the diet (5).

**ME1 Antibody - References**

Loeber G, Dworkin MB, Infante A, et al. Characterization of cytosolic malic enzyme in human tumor cells. FEBS Lett. 1994; 344:181-6.
Gonzalez-Manchon C, Ferrer M, Ayuso MS, et al. Cloning, sequencing and functional expression of a cDNA encoding a NADP-dependent malic enzyme from human liver. Gene 1995;159:255-60.
Gonzalez-Manchon C, Butta N, Ferrer M, et al. Molecular cloning and functional characterization of the human cytosolic malic enzyme promoter: thyroid hormone responsiveness. DNA Cell Biol. 1997;16:533-44.
Yang Z, Lanks CW and Tong L. Molecular mechanism for the regulation of human mitochondrial NAD(P)+-dependent malic enzyme by ATP and fumarate. Structure 2002; 10:951-60.