

**ME2 Antibody**  
Catalog # ASC11774**Specification**

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**ME2 Antibody - Product Information**

Application	WB, IHC, IF
Primary Accession	<a href="#">P23368</a>
Other Accession	<a href="#">NP_002387</a> , <a href="#">4505145</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 64 kDa
Application Notes	Observed: 60 kDa KDa ME2 antibody can be used for detection of ME2 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry at 5 µg/mL. For Immunofluorescence start at 20 µg/mL.

**ME2 Antibody - Additional Information**

Gene ID 4200

**Target/Specificity**

ME2; ME2 antibody is human specific. At least two isoforms of ME2 are known to exist; this antibody will detect both isoforms. ME2 antibody is predicted not to cross-react with ME1.

**Reconstitution & Storage**

ME2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

ME2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**ME2 Antibody - Protein Information**

Name ME2

**Function**

NAD-dependent mitochondrial malic enzyme that catalyzes the oxidative decarboxylation of malate to pyruvate.

**Cellular Location**

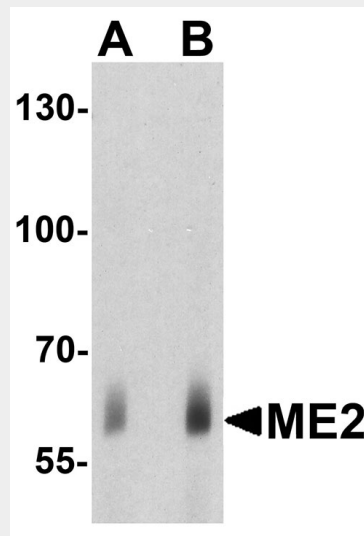
Mitochondrion matrix

**ME2 Antibody - Protocols**

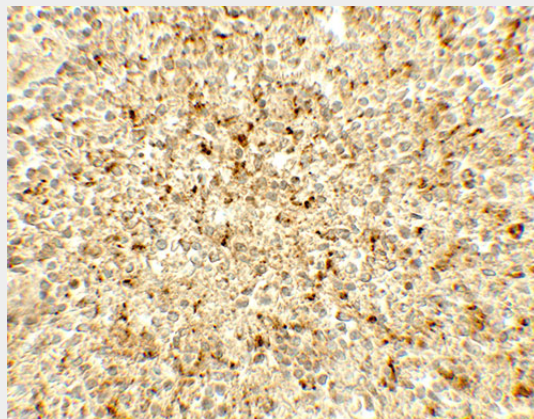
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

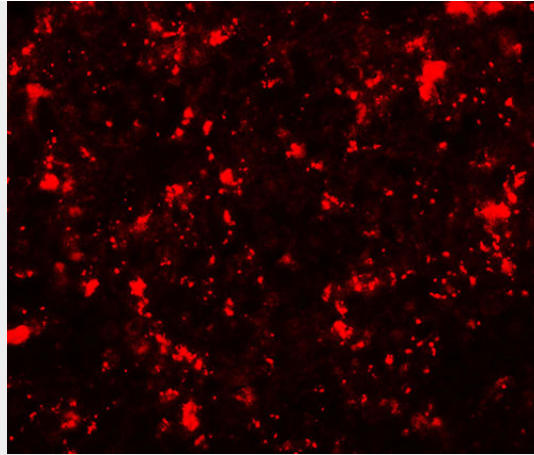
#### ME2 Antibody - Images



Western blot analysis of ME2 in human spleen tissue lysate with ME2 antibody at (A) 1 and (B) 2 µg/ml.



Immunohistochemistry of ME2 in human spleen tissue with ME2 antibody at 5 µg/mL.



Immunofluorescence of ME2 in human spleen tissue with ME2 antibody at 20 µg/mL.

### **ME2 Antibody - Background**

ME2 is a homotetrameric, mitochondrial NAD-dependent malic enzyme that catalyzes the oxidative decarboxylation of malate to pyruvate (1). It is related to malic enzyme 1 (ME1), a cytoplasmic NADP-dependent enzyme that generates NADPH for fatty acid biosynthesis (2). The expression of both malic enzymes is reciprocally regulated by p53; this regulation has been shown to modulate metabolism and senescence (3). Certain single-nucleotide polymorphism haplotypes of the ME2 gene have been shown to increase the risk for idiopathic generalized epilepsy (4).

### **ME2 Antibody - References**

- Loeber G, Infante AA, Maurer-Fogy I, et al. Human NAD(+)-dependent mitochondrial malic enzyme. cDNA cloning, primary structure, and expression in *Escherichia coli*. *J. Biol. Chem.* 1991; 266:3016-21.
- 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.
- Jiang P, Du W, Mancuso A, et al. Reciprocal regulation of p53 and malic enzymes modulates metabolism and senescence. *Nature* 2013; 493:689-83.
- Lenzen KP, Heils A, Lorenz S, et al. Association analysis of malic acid enzyme 2 gene polymorphisms with idiopathic generalized epilepsy. *Epilepsia* 2005; 46:1637-41.