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# ME2 Antibody
**Catalog # ASC11774**

## Specification

### ME2 Antibody - Product Information

| | |
|---|---|
| Application | **WB, IHC, IF** |
| Primary Accession | P23368 |
| Other Accession | NP_002387, 4505145 |
| Reactivity | **Human** |
| Host | **Rabbit** |
| Clonality | **Polyclonal** |
| Isotype | **IgG** |
| Calculated MW | **Predicted: 64 kDa**<br>**Observed: 60 kDa KDa** |
| Application Notes | **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 Immunoflorescence 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℃ for three months and -20℃, 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

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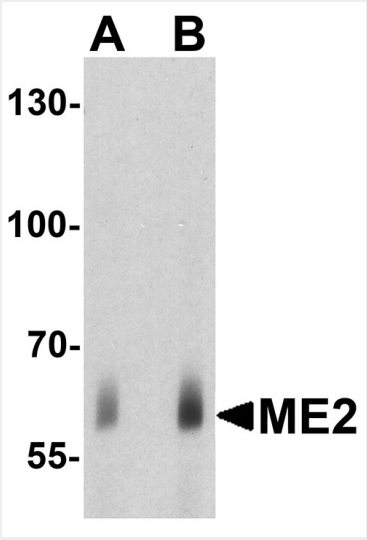
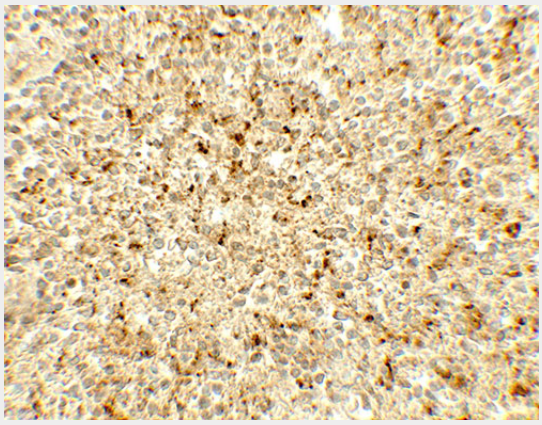
Provided below are standard protocols that you may find useful for product applications.

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

**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.

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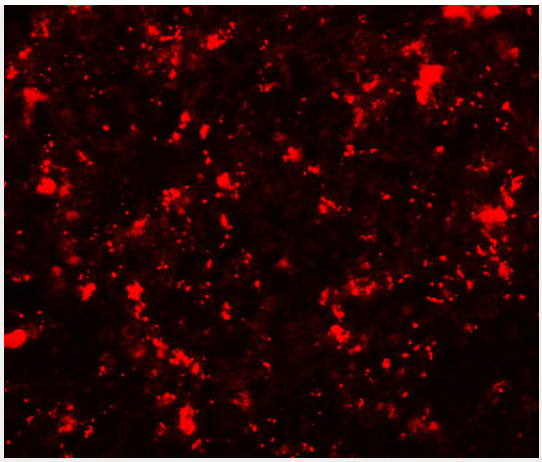

Immunofluorescence of ME2 in human spleen tissue with ME2 antibody at 20 µg/mL.

**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.