

Malic Enzyme 3 Antibody



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	67	Rabbit	#Q16798	10873

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Malic Enzyme 3 Antibody recognizes endogenous levels of total malic enzyme 3 protein. This antibody does not cross-react with malic enzyme 1 and malic enzyme 2 proteins.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala390 of human malic enzyme 3 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Malic enzymes catalyze oxidative decarboxylation of malate to pyruvate (1). The malic enzyme family in mammalian cells includes the cytosolic malic enzyme 1 (ME1) and two mitochondrial malic enzymes (ME2 and ME3) (1, 2). ME1 and ME2 are critical for tumor cell growth and their expression is repressed by tumor suppressor p53 (2). Reduced expression of ME1 and ME2 reciprocally increases the levels and activation of p53, promoting p53-mediated senescence (2). Research studies show ME3 is essential for the survival of pancreatic ductal adenocarcinoma following genomic deletion of ME2 (3). Deletion of ME3 is lethal to ME2-null cancer cells, which has been suggested to provide a potential therapeutic opportunity using collateral lethality (3, 4).

Background References

1. Pongratz, R.L. et al. (2007) *J Biol Chem* 282, 200-7.
2. Jiang, P. et al. (2013) *Nature* 493, 689-93.
3. Dey, P. et al. (2017) *Nature* 542, 119-23.
4. Muller, F.L. et al. (2015) *Trends Cancer* 1, 161-73.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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