



## Human NADP-dependent malic enzyme ELISA kit-Quantitative sandwich

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|------------------------|-----------------------------|
| <b>Cat. No.:</b>       | 0126WXX-1028                |
| <b>Assay Type:</b>     | Quantitative sandwich ELISA |
| <b>Target Species:</b> | Human                       |
| <b>Assay Target:</b>   | NADP-dependent malic enzyme |
| <b>Size:</b>           | 48T; 96T                    |

This product is for research use only and is not intended for diagnostic use.

### Product Overview

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Description</b>     | Human NADP-dependent malic enzyme ELISA kit-Quantitative sandwich is an ELISA-based <i>in vitro</i> research tool designed specifically for the quantitative detection of NADP-dependent malic enzyme in human samples with a range of 0.2- 60 ng/mL and a minimum detectable dose (sensitivity) of 0.107 ng/mL. The kit is highly sensitive and easy to use.                                                                                                                                                                                                                                                               |
| <b>Assay Principle</b> | The ELISA analytical biochemical technique is based on NADP-dependent malic enzyme antibody-NADP-dependent malic enzyme antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect NADP-dependent malic enzyme antigen targets in samples.                                                                                                                                                                                                                                                                                                                                                    |
| <b>Background</b>      | NADP-dependent malic enzyme is a crucial metabolic enzyme. Its primary function is to catalyze the conversion of malate to pyruvate while generating a key cofactor—reduced nicotinamide adenine dinucleotide phosphate (NADPH). This renders it essential for fatty acid and cholesterol synthesis, as well as antioxidant defense mechanisms. Obesity constitutes a chronic inflammatory state frequently accompanied by elevated oxidative stress levels within cells and tissues. Investigating alterations in NADP-dependent malic enzyme-related pathways offers deeper insights into the pathophysiology of obesity. |
| <b>Synonyms</b>        | Malic enzyme; ME; ME1; NADPH-malic enzyme; Decarboxylating malate dehydrogenase; Malate dehydrogenase (decarboxylating) (NADP <sup>+</sup> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Formula Weight</b>  | 55,165 Da                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**Applications**

Human NADP-dependent malic enzyme ELISA kit-Quantitative sandwich is used to quantify NADP-dependent malic enzyme in serum, plasma, cell culture supernatant, cell lysates, and tissue homogenates of human, providing data to support research in a wide range of areas, including metabolism, oxidative stress, obesity, et c.

**Research Area**

Metabolism; Oxidative stress; Obesity

**Specification**

|                                |                                                                            |
|--------------------------------|----------------------------------------------------------------------------|
| <b>Sample Type</b>             | Serum; Plasma; Cell culture supernatants; Cell lysates; Tissue homogenates |
| <b>Detection Range</b>         | 0.2- 60 ng/mL                                                              |
| <b>Sensitivity</b>             | 0.107 ng/mL                                                                |
| <b>Precision (Intra-assay)</b> | CV<8%                                                                      |
| <b>Precision (Inter-assay)</b> | CV<10%                                                                     |
| <b>Cross-reactivity</b>        | No significant cross-reactivity or interference was observed.              |
| <b>Storage</b>                 | Store at 2-8°C.                                                            |