

ENOPH1 (E-13): sc-162760

BACKGROUND

ENOPH1 (enolase-phosphatase 1), also known as E1, MASA or MST145, is a member of the MasA family of the HAD (halo-acid dehalogenase)-like hydrolase superfamily. Existing as a monomer and binding magnesium as a cofactor, ENOPH1 is a bifunctional enzyme, exhibiting both phosphatase and atypical enolase activities. ENOPH1 plays an important role in the ubiquitous methionine salvage pathway, a biochemical pathway found in all organisms that regulates methionine levels in the cell (also known as the Yang cycle in plants). More specifically, ENOPH1 catalyzes the continuous enolization and dephosphorylation of 2,3-diketo-5-methylthio-1-phosphopentane to yield the acireductone metabolite 1,2-dihydroxy-3-keto-5-methylthiopentene. Due to alternative splicing events, two isoforms exist for ENOPH1.

REFERENCES

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- Wang, H., et al. 2005. Purification, crystallization and preliminary X-ray diffraction analysis of human enolase-phosphatase E1. *Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun.* 61: 521-523.
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- Rzewuski, G., et al. 2007. OsMTN encodes a 5'-methylthioadenosine nucleosidase that is up-regulated during submergence-induced ethylene synthesis in rice (*Oryza sativa L.*). *J. Exp. Bot.* 58: 1505-1514.

CHROMOSOMAL LOCATION

Genetic locus: ENOPH1 (human) mapping to 4q21.22; Enoph1 (mouse) mapping to 5 E4.

SOURCE

ENOPH1 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ENOPH1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-162760 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ENOPH1 (E-13) is recommended for detection of ENOPH1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ENOPH1 (E-13) is also recommended for detection of ENOPH1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for ENOPH1 siRNA (h): sc-88932, ENOPH1 siRNA (m): sc-144654, ENOPH1 shRNA Plasmid (h): sc-88932-SH, ENOPH1 shRNA Plasmid (m): sc-144654-SH, ENOPH1 shRNA (h) Lentiviral Particles: sc-88932-V and ENOPH1 shRNA (m) Lentiviral Particles: sc-144654-V.

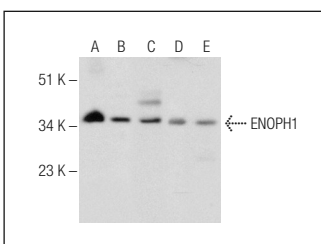
Molecular Weight of ENOPH1: 27 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, Hep G2 cell lysate: sc-2227 or SK-BR-3 cell lysate: sc-2218.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ENOPH1 (E-13): sc-162760. Western blot analysis of ENOPH1 expression in HL-60 (A), Hep G2 (B), SK-BR-3 (C) and CCRF-CEM (D) whole cell lysates and human liver tissue extract (E).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.