SANTA CRUZ BIOTECHNOLOGY, INC.

ENOPH1 (FL-261): sc-135144

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Zhang, Y., et al. 2004. Analogs of 1-phosphonooxy-2,2-dihydroxy-3-oxo-5-(methylthio)pentane, an acyclic intermediate in the methionine salvage pathway: a new preparation and characterization of activity with E1 enolase/phosphatase from *Klebsiella oxytoca*. Bioorg. Med. Chem. 12: 3847-3855.
2. Kostic, M., et al. 2004. ^{1}H, ^{13}C and ^{15}N chemical shift assignments of an enolase-phosphatase, E1, from *Klebsiella oxytoca*. J. Biomol. NMR 30: 359-360.

CHROMOSOMAL LOCATION

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

SOURCE

ENOPH1 (FL-261) is a rabbit polyclonal antibody raised against amino acids 1-261 representing full length 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.

APPLICATIONS

ENOPH1 (FL-261) 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 (FL-261) is also recommended for detection of ENOPH1 in additional species, including equine, bovine 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.

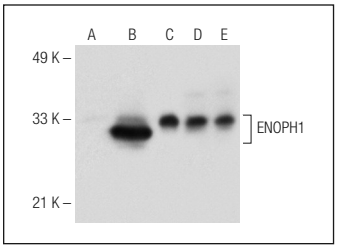
Molecular Weight of ENOPH1: 27 kDa.

Positive Controls: ENOPH1 (h2): 293T Lysate: sc-117293, ENOPH1 (m): 293T Lysate: sc-120041 or HL-60 whole cell lysate: sc-2209.

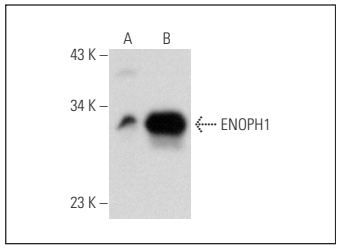
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ENOPH1 (FL-261): sc-135144. Western blot analysis of ENOPH1 expression in non-transfected 293T: sc-117752 (**A**), mouse ENOPH1 transfected 293T: sc-120041 (**B**), HL-60 (**C**), HeLa (**D**) and K-562 (**E**) whole cell lysates.



ENOPH1 (FL-261): sc-135144. Western blot analysis of ENOPH1 expression in non-transfected: sc-117752 (**A**) and human ENOPH1 transfected: sc-117293 (**B**) 293T whole cell lysates.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.