

MTH1 (H-159): sc-67291

BACKGROUND

MTH1, also known as NUDT1 (nudix (nucleoside diphosphate linked moiety X)-type motif 1), is a 179 amino acid cytoplasmic protein that is a member of the nudix hydrolase family. Highly expressed in testis, thymus and proliferating blood lymphocytes, MTH1 functions as an antimutagenic that hydrolyzes oxidized purine nucleoside triphosphates to their corresponding monophosphates. Through its ability to enzymatically hydrolyze ATP and GTP to AMP and GMP, respectively, MTH1 prevents misincorporation of GTP into DNA, thus preventing A:T to C:G transversions. The cytoplasmic location of MTH1, along with its antimutagenic capabilities, suggests that it may also be involved in the sanitization of nucleotide pools for both mitochondrial and nuclear genomes. Four isoforms of MTH1 exist—three of which are formed due to alternative splicing events and one of which is formed via a single-nucleotide polymorphism. Overexpression of MTH1 is implicated in prostate and cell lung carcinomas.

CHROMOSOMAL LOCATION

Genetic locus: NUDT1 (human) mapping to 7p22.3; Nudt1 (mouse) mapping to 5 G2.

SOURCE

MTH1 (H-159) is a rabbit polyclonal antibody raised against amino acids 38-197 mapping at the C-terminus of MTH1 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.

STORAGE

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

APPLICATIONS

MTH1 (H-159) is recommended for detection of MTH1 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).

MTH1 (H-159) is also recommended for detection of MTH1 in additional species, including canine.

Suitable for use as control antibody for MTH1 siRNA (h): sc-62647, MTH1 siRNA (m): sc-62648, MTH1 shRNA Plasmid (h): sc-62647-SH, MTH1 shRNA Plasmid (m): sc-62648-SH, MTH1 shRNA (h) Lentiviral Particles: sc-62647-V and MTH1 shRNA (m) Lentiviral Particles: sc-62648-V.

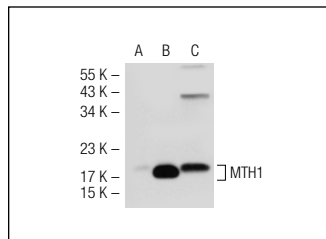
Molecular Weight of MTH1: 18 kDa.

Positive Controls: MTH1 (h): 293T Lysate: sc-112873, MTH1 (m): 293T Lysate: sc-121835 or Jurkat whole cell lysate: sc-2204.

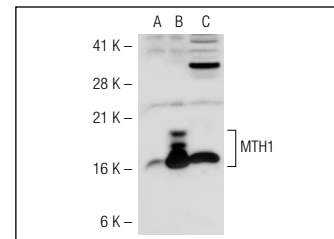
RECOMMENDED SECONDARY REAGENTS

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



MTH1 (H-159): sc-67291. Western blot analysis of MTH1 expression in non-transfected 293T: sc-117752 (A), mouse MTH1 transfected 293T: sc-121835 (B) and Jurkat (C) whole cell lysates.



MTH1 (H-159): sc-67291. Western blot analysis of MTH1 expression in non-transfected 293T: sc-117752 (A), human MTH1 transfected 293T: sc-112873 (B) and Jurkat (C) whole cell lysates.

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.



Try **MTH1 (H-1): sc-271082** or **MTH1 (A-11): sc-373709**, our highly recommended monoclonal alternatives to MTH1 (H-159).