

MTHFD2 (P-17): sc-74986

BACKGROUND

MTHFD2 (methylenetetrahydrofolate dehydrogenase 2), also known as NMDMC, is a 350 amino acid bifunctional protein that is responsible for the consecutive interconversion of tetrahydrofolate derivatives which drive the synthesis of purine, methionine and thymidylate. MTHFD2 is bifunctional in that it has methylenetetrahydrofolate dehydrogenase and methenyltetrahydrofolate cyclohydrolase activity. MTHFD2 requires either NADP or NAD as a cofactor for interconversion. Activity of these cofactors is affected by intracellular magnesium and phosphate concentrations. MTHFD2 functions as a homodimer and is localized to the mitochondria where it is expressed during the development of normal tissue.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: MTHFD2 (human) mapping to 2p13.1; Mthfd2 (mouse) mapping to 6 C3.

SOURCE

MTHFD2 (P-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MTHFD2 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-74986 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MTHFD2 (P-17) is recommended for detection of MTHFD2 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).

MTHFD2 (P-17) is also recommended for detection of MTHFD2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MTHFD2 siRNA (h): sc-75937, MTHFD2 siRNA (m): sc-75938, MTHFD2 shRNA Plasmid (h): sc-75937-SH, MTHFD2 shRNA Plasmid (m): sc-75938-SH, MTHFD2 shRNA (h) Lentiviral Particles: sc-75937-V and MTHFD2 shRNA (m) Lentiviral Particles: sc-75938-V.

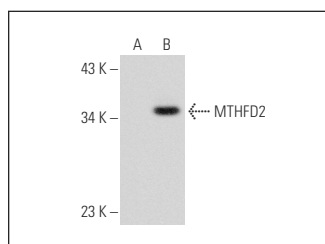
Molecular Weight of MTHFD2: 38 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or MTHFD2 (h): 293T Lysate: sc-112798.

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



MTHFD2 (P-17): sc-74986. Western blot analysis of MTHFD2 expression in non-transfected: sc-117750 (A) and human MTHFD2 transfected: sc-112798 (B) 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.