

MTMR3 (N-20): sc-47187

BACKGROUND

Myotubularin and the myotubularin-related proteins (MTMR1-9) belong to a highly conserved family of eukaryotic phosphatases. They are protein tyrosine phosphatases that utilize inositol phospholipids, rather than phosphoproteins, as substrates. MTMR family members hydrolyze both Phosphatidylinositol 3-phosphate (PtdIns3P) and PtdIns P2. MTMR2 interacts with MTMR5, an inactive family member that increases the enzymatic activity of MTMR2 and dictates its subcellular localization. Mutations in MTMR2 cause autosomal recessive Charcot-Marie-Tooth type 4B1 (CMT4B1), which is characterized by reduced nerve conduction velocities, focally folded myelin sheaths and demyelination. MTMR3 and MTMR4 can either interact with each other or self associate. MTMR6 regulates the activity of the calcium-activated potassium channel 3.1. MTMR9 regulates the activity of MTMR7 and MTMR8.

CHROMOSOMAL LOCATION

Genetic locus: MTMR3 (human) mapping to 22q12.2; Mtmr3 (mouse) mapping to 11 A1.

SOURCE

MTMR3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MTMR3 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-47187 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

MTMR3 (N-20) is recommended for detection of MTMR3 of human, mouse and, to a lesser extent, rat 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).

MTMR3 (N-20) is also recommended for detection of MTMR3 in additional species, including canine and porcine.

Suitable for use as control antibody for MTMR3 siRNA (h): sc-61088, MTMR3 siRNA (m): sc-61089, MTMR3 shRNA Plasmid (h): sc-61088-SH, MTMR3 shRNA Plasmid (m): sc-61089-SH, MTMR3 shRNA (h) Lentiviral Particles: sc-61088-V and MTMR3 shRNA (m) Lentiviral Particles: sc-61089-V.

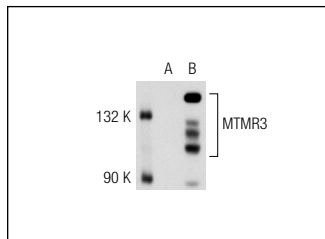
Molecular Weight of MTMR3: 134 kDa.

Positive Controls: MTMR3 (h2): 293T Lysate: sc-112826 or Sol18 nuclear extract: sc-2157.

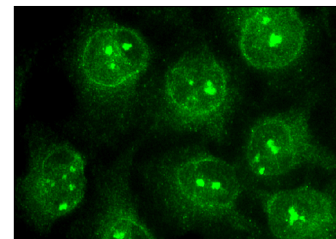
RECOMMENDED SECONDARY REAGENTS

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



MTMR3 (N-20): sc-47187. Western blot analysis of MTMR3 expression in non-transfected: sc-117752 (A) and human MTMR3 transfected: sc-112826 (B) 293T whole cell lysates.



MTMR3 (N-20): sc-47187. Immunofluorescence staining of methanol-fixed HeLa cells showing nucleolar & nuclear localization.

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 **MTMR3 (A-12): sc-393779** or **MTMR3 (G-2): sc-398353**, our highly recommended monoclonal alternatives to MTMR3 (N-20).