

PTPMT1 (H-41): sc-67370

BACKGROUND

Protein tyrosine phosphatases, or PTPs, are type I transmembrane proteins, membrane associated proteins or proteins localized in nuclei. Examples of transmembrane PTPs are LAR, PTP α , PTP β , PTP γ , PTP δ , PTP ϵ , PTP ζ , PTP κ and PTP μ . Transmembrane PTPs play diverse roles in a variety of cellular processes during development and in adult tissues. PTPMT1 (protein tyrosine phosphatase mitochondrial 1), also known as MOSP or PLIP (phosphoinositide lipid phosphatase) and previously known as DUSP23, is a widely expressed PTP membrane protein with high expression levels in pancreatic β cells. PTPMT1 exclusively localizes to the matrix face of the inner membrane of the mitochondrion. It is responsible for dephosphorylating mitochondrial proteins and therefore plays a significant role in the production of ATP and secretion of Insulin. For its substrate, PTPMT1 displays a specific preference for the lipid signaling molecule phosphatidylinositol 5-phosphate (PI(5)P).

CHROMOSOMAL LOCATION

Genetic locus: PTPMT1 (human) mapping to 11p11.2; Ptpmt1 (mouse) mapping to 2 E1.

SOURCE

PTPMT1 (H-41) is a rabbit polyclonal antibody raised against amino acids 87-127 mapping within an internal region of PTPMT1 of human origin.

PRODUCT

Each vial contains 200 μ g 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

PTPMT1 (H-41) is recommended for detection of PTPMT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PTPMT1 (H-41) is also recommended for detection of PTPMT1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for PTPMT1 siRNA (h): sc-62906, PTPMT1 siRNA (m): sc-62907, PTPMT1 shRNA Plasmid (h): sc-62906-SH, PTPMT1 shRNA Plasmid (m): sc-62907-SH, PTPMT1 shRNA (h) Lentiviral Particles: sc-62906-V and PTPMT1 shRNA (m) Lentiviral Particles: sc-62907-V.

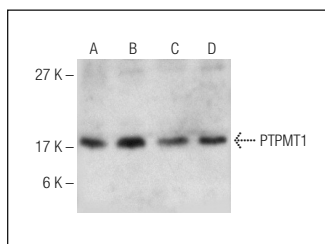
Molecular Weight of PTPMT1: 23 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Ramos cell lysate: sc-2216 or MCF7 whole cell lysate: sc-2206.

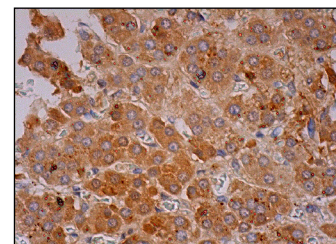
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



PTPMT1 (H-41): sc-67370. Western blot analysis of PTPMT1 expression in K-562 (A), Ramos (B), MCF7 (C) and HISM (D) whole cell lysates.



PTPMT1 (H-41): sc-67370. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

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.

MONOS
Satisfaction
Guaranteed

Try **PTPMT1 (B-3): sc-390901** or **PTPMT1 (B-12): sc-390947**, our highly recommended monoclonal alternatives to PTPMT1 (H-41).