

PITRM1 (K-19): sc-82316

BACKGROUND

PITRM1 (pitrilysin metalloproteinase 1), also known as MP1, PreP, hMP1, KIAA1104, MGC138192 or MGC141929, is a 1,037 amino acid protein belonging to the peptidase M16 family and the PreP subfamily. Encoded by a gene that maps to human chromosome 10p15.2, PITRM1 is widely expressed, with higher levels in muscle and heart compared to brain, pancreas, liver, lung and placenta. PITRM1 is an ATP-independent protease that degrades mitochondrial transit peptides and other unstructured peptides after cleavage. PITRM1 also degrades Amyloid A4 proteins in mitochondrion, suggesting a link with Alzheimer disease. PITRM1 exists as 2 alternatively spliced isoforms and is specific for peptides in the range of 10 to 65 residues. PITRM1 shows a preference for cleavage after small polar residues and before basic residues, but without positional preference. PITRM1 binds one zinc ion per subunit and is inhibited by nickel and zinc excess, while slightly activated by manganese. PITRM1 may play a role in embryonic development and may potentially contribute to mitochondrial dysfunctions.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PITRM1 (human) mapping to 10p15.2; Pitrm1 (mouse) mapping to 13 A1.

SOURCE

PITRM1 (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PITRM1 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-82316 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

PITRM1 (K-19) is recommended for detection of PITRM1 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).

PITRM1 (K-19) is also recommended for detection of PITRM1 in additional species, including equine.

Suitable for use as control antibody for PITRM1 siRNA (h): sc-76151, PITRM1 siRNA (m): sc-76152, PITRM1 shRNA Plasmid (h): sc-76151-SH, PITRM1 shRNA Plasmid (m): sc-76152-SH, PITRM1 shRNA (h) Lentiviral Particles: sc-76151-V and PITRM1 shRNA (m) Lentiviral Particles: sc-76152-V.

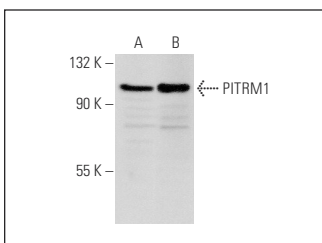
Molecular Weight of PITRM1: 114 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

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



PITRM1 (K-19): sc-82316. Western blot analysis of PITRM1 expression in HeLa (A) and HEK293 (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.

PROTOCOLS

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