

PMPCA (F-4): sc-390718

BACKGROUND

PMPCA (peptidase (mitochondrial processing) α), also known as α -MPP, P-55, INPP5E or MPPA, is a 525 amino acid protein that belongs to the peptidase M16 family and exists as a heterodimer of alpha and beta subunits. Localizing to mitochondrial matrix, PMPCA cleaves transit peptides from mitochondrial protein precursors. PMPCA is encoded by a gene that maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and Familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

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3. Zhuang, H., et al. 2006. Lupus-like disease and high interferon levels corresponding to trisomy of the type I interferon cluster on chromosome 9p. *Arthritis Rheum.* 54: 1573-1579.
4. Burmeister, T., et al. 2007. Atypical Bcr-Abl mRNA transcripts in adult acute lymphoblastic leukemia. *Haematologica* 92: 1699-1702.
5. Cottin, V., et al. 2007. Pulmonary vascular manifestations of hereditary hemorrhagic telangiectasia (Rendu-Osler disease). *Respiration* 74: 361-378.
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CHROMOSOMAL LOCATION

Genetic locus: PMPCA (human) mapping to 9q34.3.

SOURCE

PMPCA (F-4) is a mouse monoclonal antibody raised against amino acids 111-340 mapping within an internal region of PMPCA of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

PMPCA (F-4) is recommended for detection of PMPCA of human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PMPCA siRNA (h): sc-92579, PMPCA shRNA Plasmid (h): sc-92579-SH and PMPCA shRNA (h) Lentiviral Particles: sc-92579-V.

Molecular Weight of PMPCA: 58 kDa.

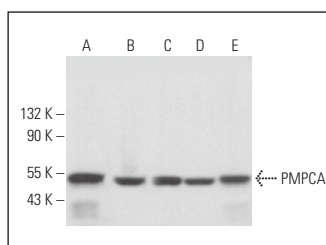
Positive Controls: MCF7 whole cell lysate: sc-2206, K-562 whole cell lysate: sc-2203 or A549 cell lysate: sc-2413.

RECOMMENDED SUPPORT REAGENTS

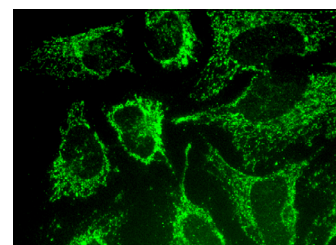
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PMPCA (F-4): sc-390718. Western blot analysis of PMPCA expression in K-562 (A), U-87 MG (B), MCF7 (C), A549 (D) and OVCA8-3 (E) whole cell lysates.



PMPCA (F-4): sc-390718. Immunofluorescence staining of methanol-fixed HeLa cells showing mitochondrial localization.

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 for detailed protocols and support products.