

PMPCA (G-2): sc-390470

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 α and β 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

1. Nagase, T., et al. 1995. Prediction of the coding sequences of unidentified human genes. III. The coding sequences of 40 new genes (KIAA0081-KIAA0120) deduced by analysis of cDNA clones from human cell line KG-1. *DNA Res.* 2: 37-43.
2. Luciano, P., et al. 1997. Functional cooperation of the mitochondrial processing peptidase subunits. *J. Mol. Biol.* 272: 213-225.
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.

CHROMOSOMAL LOCATION

Genetic locus: PMPCA (human) mapping to 9q34.3; Pmpca (mouse) mapping to 2 A3.

SOURCE

PMPCA (G-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 215-229 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.

Blocking peptide available for competition studies, sc-390470 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

PMPCA (G-2) is recommended for detection of PMPCA of mouse, rat and 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).

PMPCA (G-2) is also recommended for detection of PMPCA in additional species, including canine.

Suitable for use as control antibody for PMPCA siRNA (h): sc-92579, PMPCA siRNA (m): sc-152350, PMPCA shRNA Plasmid (h): sc-92579-SH, PMPCA shRNA Plasmid (m): sc-152350-SH, PMPCA shRNA (h) Lentiviral Particles: sc-92579-V and PMPCA shRNA (m) Lentiviral Particles: sc-152350-V.

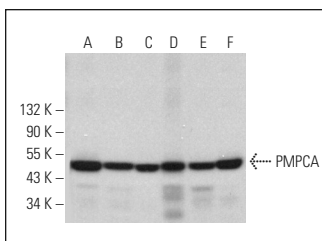
Molecular Weight of PMPCA: 58 kDa.

Positive Controls: A-673 cell lysate: sc-2414, A-10 cell lysate: sc-3806 or U-87 MG cell lysate: sc-2411.

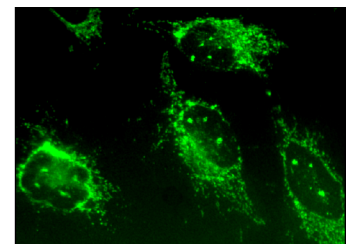
RECOMMENDED SUPPORT REAGENTS

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 (G-2): sc-390470. Western blot analysis of PMPCA expression in A-673 (A), A-10 (B), U-87 MG (C), OVCAR-3 (D), C2C12 (E) and Neuro-2A (F) whole cell lysates.



PMPCA (G-2): sc-390470. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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

PROTOCOLS

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