

PNMAL1 (D-4): sc-377122

BACKGROUND

PNMAL1 (PNMA-like 1) is a 439 amino acid protein that exists as three alternatively spliced isoforms and belongs to the PNMA family. Conserved in chimpanzee, canine, bovine, mouse and rat, PNMAL1 is encoded by a gene that maps to human chromosome 19q13.32. Consisting of approximately 63 million bases and making up over 2% of human genomic DNA, chromosome 19 contains the greatest gene density of the human chromosomes. Chromosome 19 is the genetic home for a number of immunoglobulin superfamily members, including killer cell and leukocyte Ig-like receptors, ICAMs, the CEACAM and PSG families, and Fc α receptors. Key genes for eye color and hair color also map to chromosome 19. Peutz-Jeghers syndrome, spinocerebellar ataxia type 6, the stroke disorder CADASIL, hypercholesterolemia and Insulin-dependent diabetes are also linked to chromosome 19.

REFERENCES

1. LaPoint, S.F., et al. 2000. Cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL). *Adv. Anat. Pathol.* 7: 307-321.
2. Buchet-Poyau, K., et al. 2002. Search for the second Peutz-Jeghers syndrome locus: exclusion of the STK13, PRKCG, KLK10, and PSCD2 genes on chromosome 19 and the STK11IP gene on chromosome 2. *Cytogenet. Genome Res.* 97: 171-178.
3. Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. *Nature* 428: 529-535.
4. Parham, P. 2005. Immunogenetics of killer cell immunoglobulin-like receptors. *Mol. Immunol.* 42: 459-462.

CHROMOSOMAL LOCATION

Genetic locus: PNMAL1 (human) mapping to 19q13.32.

SOURCE

PNMAL1 (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 61-93 within an internal region of PNMAL1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PNMAL1 (D-4) is available conjugated to agarose (sc-377122 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377122 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377122 PE), fluorescein (sc-377122 FITC), Alexa Fluor[®] 488 (sc-377122 AF488), Alexa Fluor[®] 546 (sc-377122 AF546), Alexa Fluor[®] 594 (sc-377122 AF594) or Alexa Fluor[®] 647 (sc-377122 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-377122 AF680) or Alexa Fluor[®] 790 (sc-377122 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377122 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PNMAL1 (D-4) is recommended for detection of PNMAL1 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), 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).

Suitable for use as control antibody for PNMAL1 siRNA (h): sc-97847, PNMAL1 shRNA Plasmid (h): sc-97847-SH and PNMAL1 shRNA (h) Lentiviral Particles: sc-97847-V.

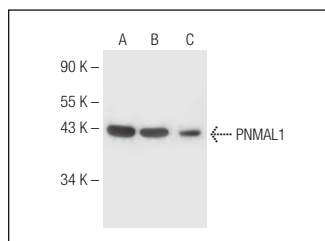
Molecular Weight of PNMAL1 isoforms 1/2/3: 48/42/23 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, A549 cell lysate: sc-2413 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-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 λ BP-FITC: sc-516185 or m-IgG λ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG λ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PNMAL1 (D-4): sc-377122. Western blot analysis of PNMAL1 expression in U-87 MG (A), A549 (B) and K-562 (C) whole cell lysates.



PNMAL1 (D-4): sc-377122. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic, membrane and nuclear staining of endothelial cells.

STORAGE

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

RESEARCH USE

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

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