

# PNMAL1 (A-2): sc-377126

## BACKGROUND

PNMAL1 (PNMA-like 1) is a 439 amino acid protein that exists as 3 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 $\alpha$  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.
5. Tews, B., et al. 2006. Identification of novel oligodendrogloma-associated candidate tumor suppressor genes in 1p36 and 19q13 using microarray-based expression profiling. *Int. J. Cancer* 119: 792-800.
6. Vikelis, M., et al. 2007. A novel CADASIL-causing mutation in a stroke patient. *Swiss Med. Wkly.* 137: 323-325.
7. Schraders, M., et al. 2008. Integrated genomic and expression profiling in mantle cell lymphoma: identification of gene-dosage regulated candidate genes. *Br. J. Haematol.* 143: 210-221.

## CHROMOSOMAL LOCATION

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

## SOURCE

PNMAL1 (A-2) 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  $\mu$ g IgG<sub>2a</sub> lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377126 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

PNMAL1 (A-2) 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  $\mu$ g per 100-500  $\mu$ 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 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.

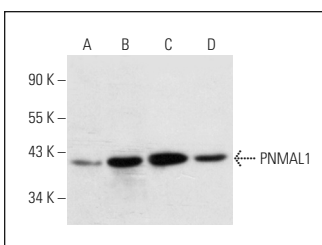
Positive Controls: IMR-32 cell lysate: sc-2409, Hep G2 cell lysate: sc-2227 or K-562 whole cell lysate: sc-2203.

## RECOMMENDED SUPPORT REAGENTS

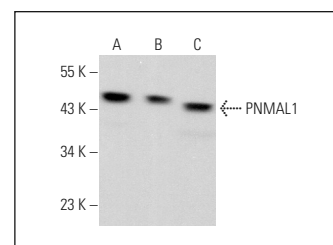
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG $\lambda$  BP-HRP: sc-516132 or m-IgG $\lambda$  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 $\lambda$  BP-FITC: sc-516185 or m-IgG $\lambda$  BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



PNMAL1 (A-2): sc-377126. Western blot analysis of PNMAL1 expression in K-562 (A), U-87 MG (B), IMR-32 (C) and Hep G2 (D) whole cell lysates.



PNMAL1 (A-2): sc-377126. Western blot analysis of PNMAL1 expression in U-87 MG (A), IMR-32 (B) and A549 (C) whole cell lysates. Detection reagent used: m-IgG $\lambda$  BP-HRP (Cruz Marker): sc-516132-CM.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.