SANTA CRUZ BIOTECHNOLOGY, INC.

PNMAL1 (D-7): sc-514819

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 Fcα 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 oligodendroglioma-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 (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 40-58 near the N-terminus of PNMAL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-514819 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PNMAL1 (D-7) 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 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).

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.

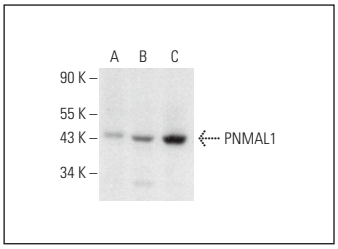
Molecular Weight of PNMAL1 isoform 1/2/3: 48/42/23 kDa.

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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



PNMAL1 (D-7): sc-514819. Western blot analysis of PNMAL1 expression in K-562 (**A**), U-87 MG (**B**) and A549 (**C**) 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.

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.