

PCNP (F-1): sc-514921

BACKGROUND

PCNP (PEST proteolytic signal containing nuclear protein) is a novel 178 amino acid nuclear protein implied to play a role in cell cycle regulation and tumorigenesis. PCNP is ubiquitinated post-translationally by NIRF (Np95/ICBP90-like RING finger protein), an ubiquitin ligase. Existing as three isoforms produced by alternative splicing events, PCNP is encoded by a gene mapping to human chromosome 3q12.3. Chromosome 3 houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan Syndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

1. De Jonghe, P., et al. 1997. Mutilating neuropathic ulcerations in a chromosome 3q13-q22 linked Charcot-Marie-Tooth disease type 2B family. *J. Neurol. Neurosurg. Psychiatr.* 62: 570-573.
2. Mori, T., et al. 2002. NIRF, a novel RING finger protein, is involved in cell-cycle regulation. *Biochem. Biophys. Res. Commun.* 296: 530-536.
3. Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
4. Mori, T., et al. 2004. NIRF is a ubiquitin ligase that is capable of ubiquitinating PCNP, a PEST-containing nuclear protein. *FEBS Lett.* 557: 209-214.
5. Tsend-Ayush, E., et al. 2004. Plasticity of human chromosome 3 during primate evolution. *Genomics* 83: 193-202.

CHROMOSOMAL LOCATION

Genetic locus: PCNP (human) mapping to 3q12.3; *Pcnp* (mouse) mapping to 16 C1.1.

SOURCE

PCNP (F-1) is a mouse monoclonal antibody raised against amino acids 1-178 representing full length PCNP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PCNP (F-1) is available conjugated to agarose (sc-514921 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514921 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514921 PE), fluorescein (sc-514921 FITC), Alexa Fluor® 488 (sc-514921 AF488), Alexa Fluor® 546 (sc-514921 AF546), Alexa Fluor® 594 (sc-514921 AF594) or Alexa Fluor® 647 (sc-514921 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514921 AF680) or Alexa Fluor® 790 (sc-514921 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PCNP (F-1) is recommended for detection of PCNP of mouse, rat and 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 PCNP siRNA (h): sc-78117, PCNP siRNA (m): sc-152115, PCNP shRNA Plasmid (h): sc-78117-SH, PCNP shRNA Plasmid (m): sc-152115-SH, PCNP shRNA (h) Lentiviral Particles: sc-78117-V and PCNP shRNA (m) Lentiviral Particles: sc-152115-V.

Molecular Weight (predicted) of PCNP: 19 kDa.

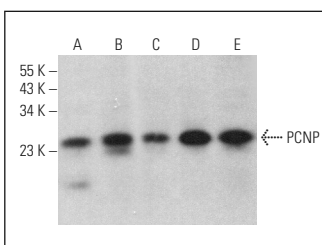
Molecular Weight (observed) of PCNP: 26 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Jurkat nuclear extract: sc-2132.

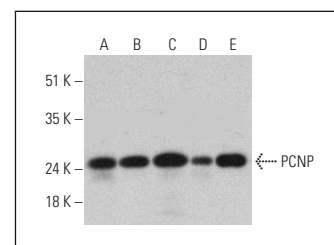
RECOMMENDED SUPPORT REAGENTS

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



PCNP (F-1): sc-514921. Western blot analysis of PCNP expression in Jurkat (A), PC-3 (B), C3H/10T1/2 (C), 3T3-L1 (D) and C6 (E) whole cell lysates.



PCNP (F-1): sc-514921. Western blot analysis of PCNP expression in HeLa (A), K-562 (B) and Jurkat (C) whole cell lysates and Hep G2 (D) and Jurkat (E) nuclear extracts.

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.