

# PSPC1 (N-16): sc-84576

## BACKGROUND

PSPC1 (paraspeckle component 1), also known as PSP1, is a 523 amino acid protein that localizes to both the cytoplasm and the nuclear matrix and contains 2 RRM (RNA recognition motif) domains. Expressed in liver, kidney, pancreas, heart, brain, placenta and skeletal muscle, PSPC1 is able to form heterodimers with p54/nrb and functions to regulate androgen receptor-mediated gene transcription activity, specifically in sertoli cell lines. PSPC1 exists as two alternatively spliced isoforms, designated  $\alpha$  and  $\beta$ , which are subject to DNA damage-dependent phosphorylation, probably by ATR or ATM. The gene encoding PSPC1 maps to human chromosome 13, which houses over 400 genes, such as BRCA2 and RB1, and comprises nearly 4% of the human genome. Trisomy 13, also known as Patau syndrome, is deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

## REFERENCES

- Andersen, J.S., et al. 2002. Directed proteomic analysis of the human nucleolus. *Curr. Biol.* 12: 1-11.
- Fox, A.H., et al. 2002. Paraspeckles: a novel nuclear domain. *Curr. Biol.* 12: 13-25.
- Ishitani, K., et al. 2003. p54/nrb acts as a transcriptional coactivator for activation function 1 of the human androgen receptor. *Biochem. Biophys. Res. Commun.* 306: 660-665.
- Myojin, R., et al. 2004. Expression and functional significance of mouse paraspeckle protein 1 on spermatogenesis. *Biol. Reprod.* 71: 926-932.
- Fox, A.H., et al. 2005. P54/nrb forms a heterodimer with PSP1 that localizes to paraspeckles in an RNA-dependent manner. *Mol. Biol. Cell* 16: 5304-5315.
- Andersen, J.S., et al. 2005. Nucleolar proteome dynamics. *Nature* 433: 77-83.

## CHROMOSOMAL LOCATION

Genetic locus: PSPC1 (human) mapping to 13q12.11; Pspc1 (mouse) mapping to 14 C3.

## SOURCE

PSPC1 (N-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of PSPC1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84576 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

PSPC1 (N-16) is recommended for detection of PSPC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with PSP, PSPA and PSP94. PSPC1 (N-16) is also recommended for detection of PSPC1 in additional species, including porcine.

Suitable for use as control antibody for PSPC1 siRNA (h): sc-76279, PSPC1 siRNA (m): sc-152566, PSPC1 shRNA Plasmid (h): sc-76279-SH, PSPC1 shRNA Plasmid (m): sc-152566-SH, PSPC1 shRNA (h) Lentiviral Particles: sc-76279-V and PSPC1 shRNA (m) Lentiviral Particles: sc-152566-V.

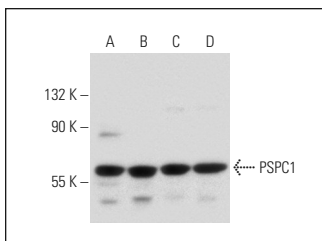
Molecular Weight of PSPC1: 59 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, BJAB nuclear extract: sc-2145 or Jurkat nuclear extract: sc-2132.

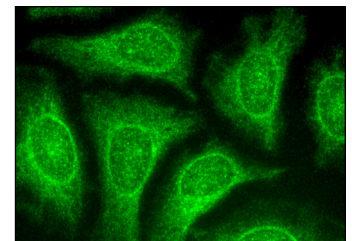
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



PSPC1 (N-16): sc-84576. Western blot analysis of PSPC1 expression in K-562 (A), Ramos (B), BJAB (C) and Jurkat (D) nuclear extracts.



PSPC1 (N-16): sc-84576. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

## RESEARCH USE

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

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Try **PSPC1 (G-7): sc-374387** or **PSPC1 (C-3): sc-374181**, our highly recommended monoclonal alternatives to PSPC1 (N-16).