

PSPC1 (G-7): sc-374387

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 two 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 α and β , 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.

CHROMOSOMAL LOCATION

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

SOURCE

PSPC1 (G-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 471-512 near the C-terminus of PSPC1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ 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-374387 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PSPC1 (G-7) is recommended for detection of PSPC1 of mouse, rat and 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).

PSPC1 (G-7) is also recommended for detection of PSPC1 in additional species, including equine, canine, bovine and 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.

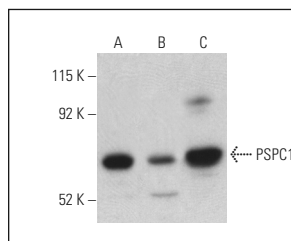
Molecular Weight of PSPC1: 59 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Sol8 nuclear extract: sc-2157 or HeLa whole cell lysate: sc-2200.

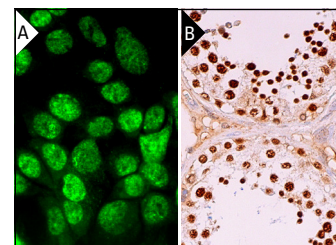
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (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 κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



PSPC1 (G-7): sc-374387. Western blot analysis of PSPC1 expression in K-562 (A) and RPMI-8226 (B) whole cell lysates and Sol8 nuclear extract (C). Detection reagent used: m-IgG₃ BP-HRP: sc-533670.



PSPC1 (G-7): sc-374387. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts (B).

SELECT PRODUCT CITATIONS

1. Bottini, S., et al. 2017. Post-transcriptional gene silencing mediated by microRNAs is controlled by nucleoplasmic Sfpq. *Nat. Commun.* 8: 1189.
2. Borini Etichetti, C.M., et al. 2020. Expression of zebrafish cpsf6 in embryogenesis and role of protein domains on subcellular localization. *Gene Expr. Patterns* 36: 119114.
3. Zhao, J., et al. 2022. Identification and characterization of a special type of subnuclear structure: AGGF1-coated paraspeckles. *FASEB J.* 36: e22366.

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.