

PSPC1 (C-3): sc-374181

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.

REFERENCE

1. Andersen, J.S., et al. 2002. Directed proteomic analysis of the human nucleolus. *Curr. Biol.* 12: 1-11.
2. Fox, A.H., et al. 2002. Paraspeckles: a novel nuclear domain. *Curr. Biol.* 12: 13-25.

CHROMOSOMAL LOCATION

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

SOURCE

PSPC1 (C-3) 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 IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PSPC1 (C-3) is available conjugated to agarose (sc-374181 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374181 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374181 PE), fluorescein (sc-374181 FITC), Alexa Fluor[®] 488 (sc-374181 AF488), Alexa Fluor[®] 546 (sc-374181 AF546), Alexa Fluor[®] 594 (sc-374181 AF594) or Alexa Fluor[®] 647 (sc-374181 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374181 AF680) or Alexa Fluor[®] 790 (sc-374181 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374181 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

PSPC1 (C-3) 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).

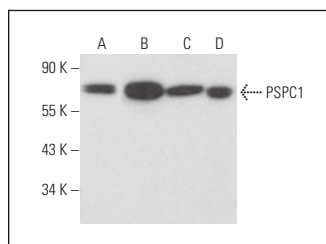
PSPC1 (C-3) is also recommended for detection of PSPC1 in additional species, including equine, canine, bovine and porcine.

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.

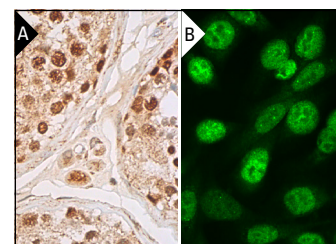
Molecular Weight of PSPC1: 59 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Raji whole cell lysate: sc-364236 or WR19L cell lysate: sc-3805.

DATA



PSPC1 (C-3): sc-374181. Western blot analysis of PSPC1 expression in HeLa (A), Raji (B) and WR19L (C) whole cell lysates and WEHI-231 nuclear extract (D).



PSPC1 (C-3): sc-374181. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and Leydig cells (A). PSPC1 (C-3) Alexa Fluor[®] 488: sc-374181 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization. Blocked with UltraCruz[®] Blocking Reagent: sc-516214 (B).

SELECT PRODUCT CITATIONS

1. Kula, A., et al. 2013. HIV-1 pre-mRNA commitment to Rev mediated export through PSF and matrin 3. *Virology* 435: 329-340.
2. Tang, B., et al. 2022. Extracellular 5'-methylthioadenosine inhibits intracellular symmetric dimethylarginine protein methylation of FUSE-element binding proteins. *J. Biol. Chem.* 298: 102367.
3. Chen, D., et al. 2023. LncRNA NEAT1 suppresses cellular senescence in hepatocellular carcinoma via KIF11-dependent repression of CDKN2A. *Clin. Transl. Med.* 13: e1418.
4. Luo, X., et al. 2024. CSTF3 contributes to platinum resistance in ovarian cancer through alternative polyadenylation of lncRNA NEAT1 and generating the short isoform NEAT1_1. *Cell Death Dis.* 15: 432.

RESEARCH USE

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