

Psf2 (F-7): sc-376595



The Power to Question

BACKGROUND

Psf2, also known as GINS2 (GINS complex subunit 2), CGI-122, DC5 or HSPC037, is a 185 amino acid protein that localizes to the nucleus and exists as a mammalian homolog of yeast Psf2. Functioning as a component of the heterotrimeric GINS complex, Psf2 binds to single-stranded DNA and plays a crucial role in the initiation of DNA replication, as well as in the progression of DNA replication forks. Psf2 is subject to DNA damage-dependent phosphorylation, probably by ATM or ATR. The gene encoding Psf2 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

- Lai, C.H., et al. 2000. Identification of novel human genes evolutionarily conserved in *Caenorhabditis elegans* by comparative proteomics. *Genome Res.* 10: 703-713.
- Takayama, Y., et al. 2003. GINS, a novel multiprotein complex required for chromosomal DNA replication in budding yeast. *Genes Dev.* 17: 1153-1165.
- Ueno, M., et al. 2005. Psf1 is essential for early embryogenesis in mice. *Mol. Cell. Biol.* 25: 10528-10532.

CHROMOSOMAL LOCATION

Genetic locus: GINS2 (human) mapping to 16q24.1; Gins2 (mouse) mapping to 8 E1.

SOURCE

Psf2 (F-7) is a mouse monoclonal antibody raised against amino acids 1-185 representing full length Psf2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-376595 X, 200 µg/0.1 ml.

Psf2 (F-7) is available conjugated to agarose (sc-376595 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376595 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376595 PE), fluorescein (sc-376595 FITC), Alexa Fluor® 488 (sc-376595 AF488), Alexa Fluor® 546 (sc-376595 AF546), Alexa Fluor® 594 (sc-376595 AF594) or Alexa Fluor® 647 (sc-376595 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376595 AF680) or Alexa Fluor® 790 (sc-376595 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

Psf2 (F-7) is recommended for detection of Psf2 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 Psf2 siRNA (h): sc-76263, Psf2 siRNA (m): sc-76264, Psf2 shRNA Plasmid (h): sc-76263-SH, Psf2 shRNA Plasmid (m): sc-76264-SH, Psf2 shRNA (h) Lentiviral Particles: sc-76263-V and Psf2 shRNA (m) Lentiviral Particles: sc-76264-V.

Psf2 (F-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of Psf2: 21 kDa.

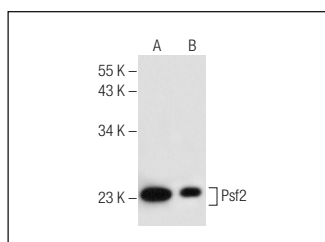
Molecular Weight (observed) of Psf2: 21-24 kDa.

Positive Controls: Psf2 (h): 293T Lysate: sc-370371, Hep G2 cell lysate: sc-2227 or MCF7 nuclear extract: sc-2149.

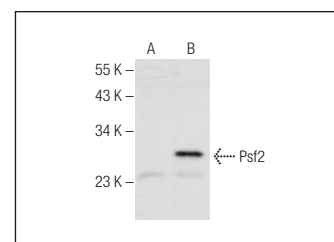
RECOMMENDED SUPPORT REAGENTS

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



Psf2 (F-7): sc-376595. Western blot analysis of Psf2 expression in Hep G2 whole cell lysate (A) and MCF7 nuclear extract (B).



Psf2 (F-7): sc-376595. Western blot analysis of Psf2 expression in non-transfected: sc-117752 (A) and human Psf2 transfected: sc-370371 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Hu, H., et al. 2022. GINS2 regulates the proliferation and apoptosis of colon cancer cells through PTP4A1. *Mol. Med. Rep.* 25: 117.
- Xu, X., et al. 2023. DNA replication initiation factor RECQ4 possesses a role in antagonizing DNA replication initiation. *Nat. Commun.* 14: 1233.

RESEARCH USE

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