SANTA CRUZ BIOTECHNOLOGY, INC.

Psf2 (C-17): sc-82717

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

1. Lai, C.H., et al. 2000. Identification of novel human genes evolutionarily conserved in *Caenorhabditis elegans* by comparative proteomics. Genome Res. 10: 703-713.
2. Takayama, Y., et al. 2003. GINS, a novel multiprotein complex required for chromosomal DNA replication in budding yeast. Genes Dev. 17: 1153-1165.
3. Ueno, M., et al. 2005. Psf1 is essential for early embryogenesis in mice. Mol. Cell. Biol. 25: 10528-10532.
4. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610609. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. Science 316: 1160-1166.
6. Thomassen, M., et al. 2009. Gene expression meta-analysis identifies chromosomal regions and candidate genes involved in breast cancer metastasis. Breast Cancer Res. Treat. 113: 239-249.

CHROMOSOMAL LOCATION

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

SOURCE

Psf2 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Psf2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-82717 P, (100 µg 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

Psf2 (C-17) is recommended for detection of Psf2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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.

Molecular Weight of Psf2: 21 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.