

SSU72 (N-16): sc-69613

BACKGROUND

SSU72, also known as HSPC182 or PNAS-120, is a 194 amino acid protein that localizes to both the nucleus and the cytoplasm and contains one coiled coil domain. Existing as multiple alternatively spliced isoforms, SSU72 interacts with TFIIB, Rb and DNAM-1 and functions to catalyze the dephosphorylation of target proteins, possibly playing a role in RNA processing and termination via dephosphorylation of Pol II. SSU72, the mammalian homolog of SSU72, is encoded by a gene that maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

- Dichtl, B., et al. 2002. A role for SSU72 in balancing RNA polymerase II transcription elongation and termination. *Mol. Cell.* 10: 1139-1150.
- Meinhart, A., et al. 2003. The mRNA transcription/processing factor SSU72 is a potential tyrosine phosphatase. *J. Biol. Chem.* 278: 15917-15921.
- Krishnamurthy, S., et al. 2004. SSU72 Is an RNA polymerase II CTD phosphatase. *Mol. Cell.* 14: 387-394.
- St-Pierre, B., et al. 2005. Conserved and specific functions of mammalian SSU72. *Nucleic Acids Res.* 33: 464-477.
- Ganem, C., et al. 2006. Kinase Cak1 functionally interacts with the Paf1 complex and phosphatase SSU72 via kinases Ctk1 and Bur1. *Mol. Genet. Genomics.* 275: 136-147.
- Singh, B.N. and Hampsey, M. 2007. A transcription-independent role for TFIIB in gene looping. *Mol. Cell.* 27: 806-816.
- Reyes-Reyes, M. and Hampsey, M. 2007. Role for the SSU72 C-terminal domain phosphatase in RNA polymerase II transcription elongation. *Mol. Cell. Biol.* 27: 926-936.
- Ghazy, M.A., et al. 2009. The essential N-terminus of the Pta1 scaffold protein is required for snoRNA transcription termination and SSU72 function but is dispensable for Pre-mRNA 3'-end processing. *Mol. Cell. Biol.* 29: 2296-2307.
- Zhang, H., et al. 2009. High resolution linkage and linkage disequilibrium analyses of chromosome 1p36 SNPs identify new positional candidate genes for low bone mineral density. *Osteoporos. Int.* 20: 341-346.

CHROMOSOMAL LOCATION

Genetic locus: SSU72 (human) mapping to 1p36.33; Ssu72 (mouse) mapping to 4 E2.

SOURCE

SSU72 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SSU72 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-69613 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SSU72 (N-16) is recommended for detection of SSU72 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

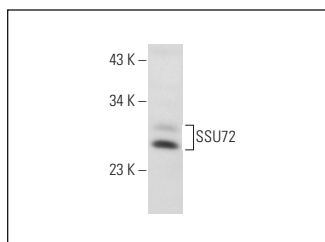
SSU72 (N-16) is also recommended for detection of SSU72 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for SSU72 siRNA (h): sc-76578, SSU72 siRNA (m): sc-76579, SSU72 shRNA Plasmid (h): sc-76578-SH, SSU72 shRNA Plasmid (m): sc-76579-SH, SSU72 shRNA (h) Lentiviral Particles: sc-76578-V and SSU72 shRNA (m) Lentiviral Particles: sc-76579-V.

Molecular Weight of SSU72: 23 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

DATA



SSU72 (N-16): sc-69613. Western blot analysis of SSU72 expression in Jurkat whole cell lysate.

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 or our catalog for detailed protocols and support products.