



SCP-1 (K-16): sc-20837

BACKGROUND

Synaptonemal complexes are meiosis-specific nuclear organelles that are involved in chromosome rearrangements, such as chromosome pairing and recombination during meiotic prophase. The synaptonemal complex protein 1 (SCP-1), also known as SYCP1(A), SYN1(I) and HOM-TES-14, is a protein product of human chromosome 1p13-p12. SCP-1 is a major component of the transverse filaments of synaptonemal complexes and functions by pairing homologous chromosomes during meiotic prophase in spermatocytes, which is an essential step for the generation of haploid cells in meiosis I. SCP-1 is expressed in the testis, adult brain, some malignant gliomas, breast, renal cell and ovarian cancer. SCP-1 is known to be selectively expressed during the meiotic prophase of spermatocytes and shows cell cycle phase-independent nuclear expression in cancer cells.

REFERENCES

1. Meuwissen, R., et al. 1992. A coiled-coil related protein specific for synapsed regions of meiotic prophase chromosomes. *EMBO J.* 11: 5091-5100.
2. Kerr, S., et al. 1996. Ott, a mouse X-linked multigene family expressed specifically during meiosis. *Hum. Mol. Genet.* 5: 1139-1148.
3. Tureci, O., et al. 1998. Identification of a meiosis-specific protein as a member of the class of cancer/testis antigens. *Proc. Natl. Acad. Sci. USA* 95: 5211-5216.
4. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602162: World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Pfeifer, C., et al. 2001. Centromere and telomere redistribution precedes homologue pairing and terminal synapsis initiation during prophase I of cattle spermatogenesis. *Cytogenet. Cell Genet.* 93: 304-314.
6. Stoop, H., et al. 2001. Reactivity of germ cell maturation stage-specific markers in spermatocytic seminoma: diagnostic and etiological implications. *Lab. Invest.* 81: 919-928.
7. LocusLink Report (LocusID: 6847). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: Sycp1 (mouse) mapping to 3 F2.2.

SOURCE

SCP-1 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SCP-1 of mouse origin.

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.

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-20837 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SCP-1 (K-16) is recommended for detection of SCP-1 of mouse and rat 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 SCP-1 siRNA (m): sc-37643, SCP-1 shRNA Plasmid (m): sc-37643-SH and SCP-1 shRNA (m) Lentiviral Particles: sc-37643-V.

Molecular Weight of SCP-1: 111 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.

SELECT PRODUCT CITATIONS

1. Mark, M., et al. 2008. STRA8-deficient spermatocytes initiate, but fail to complete, meiosis and undergo premature chromosome condensation. *J. Cell Sci.* 121: 3233-3242.

PROTOCOLS

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