SCP-2 (T-16): sc-20841

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

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 2 (SCP-2), also known as SYCP2, is a 173 kDa protein product of human chromosome 20q13.33. SCP-2 and SCP-3 are major components of the lateral elements of synaptonemal complexes. SCP-2 is expressed specifically in testicular meiotic prophase cells. SCP-2 helps shape the *in vivo* structure of the axial element during meiotic prophase. SCP-2 and SCP-3 first appear in leptotene-stage spermatocytes and disappear in late meiotic cells.

REFERENCES

1. Offenberg, H., et al. 1998. SCP2: a major protein component of the axial elements of synaptonemal complexes of the rat. Nucleic Acids Res. 26: 2572-2579.

2. Schalk, J., et al. 1998. Localization of SCP2 and SCP3 protein molecules within synaptonemal complexes of the rat. Chromosoma 107: 540-548.

3. 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/

4. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604105. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

5. Peltari, J., et al. 2001. A meiotic chromosomal core consisting of cohesin complex proteins recruits DNA recombination proteins and promotes synapsis in the absence of an axial element in mammalian meiotic cells. Mol. Cell. Biol. 21: 5667-5677.

6. LocusLink Report (LocusID: 10388). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: SYCP2 (human) mapping to 20q13.33; Sycp2 (mouse) mapping to 2 H4.

SOURCE

SCP-2 (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SCP-2 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-20841 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

SCP-2 (T-16) is recommended for detection of SCP-2 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).

SCP-2 (T-16) is also recommended for detection of SCP-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SCP-2 siRNA (h): sc-37644, SCP-2 siRNA (m): sc-37645, SCP-2 shRNA Plasmid (h): sc-37644-SH, SCP-2 shRNA Plasmid (m): sc-37645-SH, SCP-2 shRNA (h) Lentiviral Particles: sc-37644-V and SCP-2 shRNA (m) Lentiviral Particles: sc-37645-V.

Molecular Weight of SCP-2: 176 kDa.

Positive Controls: Sol8 cell lysate: sc-2249 or Sol8 nuclear extract: sc-2157.

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.

DATA
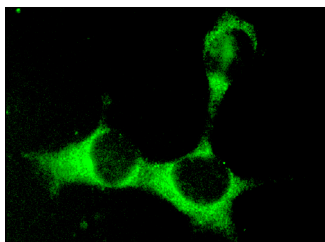
SCP-2 (T-16): sc-20841. Immunofluorescence staining of methanol-fixed Sol8 cells showing cytoplasmic localization.

RESEARCH USE

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

PROTOCOLS

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