SANTA CRUZ BIOTECHNOLOGY, INC.

SCP-2 (K-13): sc-20840

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 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.

CHROMOSOMAL LOCATION

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

SOURCE

SCP-2 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-20840 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.

RESEARCH USE

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

APPLICATIONS

SCP-2 (K-13) is recommended for detection of SCP-2 of human and, to a lesser extent, 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-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.

SELECT PRODUCT CITATIONS

1. Espinosa, A.M., et al. 2013. Mitosis is a source of potential markers for screening and survival and therapeutic targets in cervical cancer. PLoS ONE 8: e55975.

PROTOCOLS

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