

# SCP-3 (K-13): sc-33875

## BACKGROUND

Synaptonemal complexes are meiosis-specific nuclear organelles that are involved in chromosome rearrangements, such as chromosome pairing and recombination during meiotic prophase. SCP-2 and SCP-3 are major components of the lateral elements of synaptonemal complexes. SCP-3 is a sister chromatid arm cohesin during mammalian meiosis I. It has a C-terminal coiled-coil domain that promotes homotypic interactions *in vitro*. SCP-3 is expressed in testicular meiotic prophase cells and primordial germ cells. SCP-2 and SCP-3 first appear in leptotene-stage spermatocytes and disappear in late meiotic cells.

## REFERENCES

- Schalk, J., et al. 1998. Localization of SCP-2 and SCP-3 protein molecules within synaptonemal complexes of the rat. *Chromosoma* 107: 540-548.
- Offenberg, H., et al. 1998. SCP-2: a major protein component of the axial elements of synaptonemal complexes of the rat. *Nucleic Acids Res.* 26: 2572-2579.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 602162. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Prieto, I., et al. 2001. Mammalian STAG3 is a cohesion specific to sister chromatid arms in meiosis I. *Nat. Cell Biol.* 3: 761-766.
- 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.
- 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: SYCP3 (human) mapping to 12q23.2; Sycp3 (mouse) mapping to 10 C1.

## SOURCE

SCP-3 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SCP-3 of mouse 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-33875 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

SCP-3 (K-13) is recommended for detection of SCP-3 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), immunohistochemistry (including paraffin-embedded sections) (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-3 siRNA (h): sc-44882, SCP-3 siRNA (m): sc-37646, SCP-3 shRNA Plasmid (h): sc-44882-SH, SCP-3 shRNA Plasmid (m): sc-37646-SH, SCP-3 shRNA (h) Lentiviral Particles: sc-44882-V and SCP-3 shRNA (m) Lentiviral Particles: sc-37646-V.

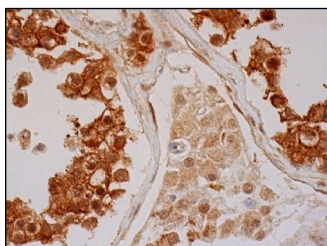
Molecular Weight of SCP-3 isoforms: 30/33 kDa.

Positive Controls: mouse testis extract: sc-2405, rat testis extract: sc-2400 or mouse embryo extract: sc-364239.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Biotin 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<sup>™</sup> Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



SCP-3 (K-13): sc-33875. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

## RESEARCH USE

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

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Try **SCP-3 (D-1): sc-74569** or **SCP-3 (G-3): sc-74568**, our highly recommended monoclonal alternatives to SCP-3 (K-13). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **SCP-3 (D-1): sc-74569**.