

SCP-3 (FL-254): sc-33195

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.

CHROMOSOMAL LOCATION

Genetic locus: Sycp3 (mouse) mapping to 10 C1.

SOURCE

SCP-3 (FL-254) is a rabbit polyclonal antibody raised against amino acids 1-254 representing full length 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.

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 (FL-254) is recommended for detection of SCP-3 of mouse and rat 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), 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 (m): sc-37646, SCP-3 shRNA Plasmid (m): sc-37646-SH and SCP-3 shRNA (m) Lentiviral Particles: sc-37646-V.

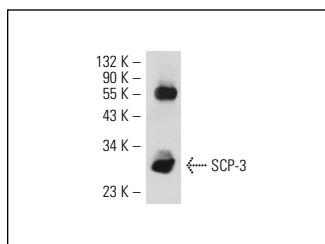
Molecular Weight of SCP-3 isoforms: 30/33 kDa.

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 goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



SCP-3 (FL-254): sc-33195. Western blot analysis of SCP-3 expression in mouse testis tissue extract.

SELECT PRODUCT CITATIONS

- Korhonen, H.M., et al. 2011. Dicer is required for haploid male germ cell differentiation in mice. *PLoS ONE* 6: e24821.
- Evron, A., et al. 2012. Human amniotic epithelial cells differentiate into cells expressing germ cell specific markers when cultured in medium containing serum substitute supplement. *Reprod. Biol. Endocrinol.* 10: 108.
- Reynolds, A., et al. 2012. RNF212 is a dosage-sensitive regulator of crossing-over during mammalian meiosis. *Nat. Genet.* 45: 269-728.
- Qiao, H., et al. 2012. Interplay between synaptonemal complex, homologous recombination, and centromeres during mammalian meiosis. *PLoS Genet.* 8: e1002790.
- Johnson, M.E., et al. 2013. A specific family of interspersed repeats (SINEs) facilitates meiotic synapsis in mammals. *Mol. Cytogenet.* 6: 1.

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 (FL-254). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **SCP-3 (D-1): sc-74569**.