

# Spo11 (H-300): sc-33146

## BACKGROUND

Spo11 is a type II topoisomerase that is thought to generate the chromosome breaks that initiate meiotic recombination. The Spo11 protein initiates meiotic recombination by generating DNA double-strand breaks (DSBs) and is required for meiotic synapsis in *S. cerevisiae*. The DSBs are located mostly in promoter regions, where the chromatin is in an open configuration, and cluster in domains along the chromosome. Expression of the Spo11 is detected mainly in the testis, in agreement with its predicted function in the initiation of meiotic recombination. Disruption of Spo11 leads to severe gonadal abnormalities from defective meiosis and results in infertility.

## REFERENCES

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2. Baudat, F., Manova, K., Yuen, J.P., Jasin, M. and Keeney, S. 2000. Chromosome synapsis defects and sexually dimorphic meiotic progression in mice lacking Spo11. *Mol. Cell* 6: 989-998.
3. Metzler-Guillemain, C. and de Massy, B. 2000. Identification and characterization of an Spo11 homologue in the mouse. *Chromosoma* 109: 133-138.
4. Celerin, M., Merino, S.T., Stone, J.E., Menzie, A.M. and Zolan, M.E. 2000. Multiple roles of Spo11 in meiotic chromosome behavior. *EMBO J.* 19: 2739-2750.
5. Romanienko, P.J. and Camerini-Otero, R.D. 2000. The mouse Spo11 gene is required for meiotic chromosome synapsis. *Mol. Cell* 6: 975-987.
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## CHROMOSOMAL LOCATION

Genetic locus: SPO11 (human) mapping to 20q13.31; Spo11 (mouse) mapping to 2 H3.

## SOURCE

Spo11 (H-300) is a rabbit polyclonal antibody raised against amino acids 97-396 mapping at the C-terminus of Spo11 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.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

Spo11 (H-300) is recommended for detection of Spo11 isoforms 1 and 2 of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Spo11 (H-300) is also recommended for detection of Spo11 isoforms 1 and 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Spo11 siRNA (h): sc-38436, Spo11 siRNA (m): sc-38437, Spo11 shRNA Plasmid (h): sc-38436-SH, Spo11 shRNA Plasmid (m): sc-38437-SH, Spo11 shRNA (h) Lentiviral Particles: sc-38436-V and Spo11 shRNA (m) Lentiviral Particles: sc-38437-V.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## RESEARCH USE

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


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Try **Spo11 (C-4): sc-377161**, our highly recommended monoclonal alternative to Spo11 (H-300).