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SPO11 Rabbit pAb

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Catalog # AP59210

Product Information

Application	WB
Primary Accession	Q9Y5K1
Reactivity	Rat, Human, Mouse
Predicted	Pig, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44537
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SPO11
Epitope Specificity	151-330/396
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nuclear
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

Gene ID	23626
Other Names	Meiotic recombination protein SPO11, 5.6.2.2, Cancer/testis antigen 35, CT35, SPO11
Dilution	WB=1:500-2000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

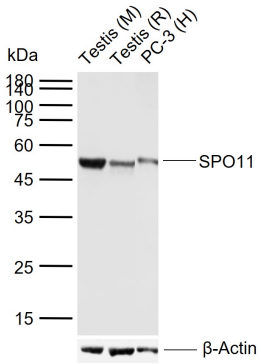
Protein Information

Name	SPO11 {ECO:0000303|PubMed:10622720, ECO:0000312|HGNC:HGNC:11250}
Function	DNA endonuclease, which specifically mediates DNA cleavage that forms the double-strand breaks (DSB) that initiate meiotic recombination. SPO11 covalently attaches itself to the 5' DNA strand during DSB formation and each strand is cleaved by a composite active site assembled at the interface of two SPO11 monomers, with the two cleavages staggered to produce a two-nucleotide 5' overhang. SPO11 cleavage site selection is driven by a mild sequence bias and a preference for bendable and underwound DNA. Together with TOP6BL, promotes relaxation of negative and positive supercoiled DNA and DNA decatenation through cleavage and ligation cycles. Required for the phosphorylation of SMC3, HORMAD1 and HORMAD2.
Cellular Location	Chromosome {ECO:0000250|UniProtKB:Q9WTK8}. Nucleus {ECO:0000250|UniProtKB:Q9WTK8}. Note=Localizes to discrete foci during leptotene and to homologously synapsed chromosomes {ECO:0000250|UniProtKB:Q9WTK8}
Tissue Location	Highly expressed in testis.

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Images



Sample:
Lane 1: Mouse Testis tissue lysates
Lane 2: Rat Testis tissue lysates
Lane 3: Human PC-3 cell lysates
Primary: Anti-SPO11 (AP59210) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 45 kDa
Observed band size: 48 kDa

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