

**Smc3 (13R9) Rat Monoclonal Antibody**  
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**Catalog # AP93634****Specification**

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**Smc3 (13R9) Rat Monoclonal Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | WB, IHC                |
| Primary Accession | <a href="#">O9CW03</a> |
| Reactivity        | Mouse                  |
| Clonality         | Monoclonal             |
| Calculated MW     | 141556                 |

**Smc3 (13R9) Rat Monoclonal Antibody - Additional Information****Gene ID** 13006**Other Names**

Structural maintenance of chromosomes protein 3, SMC protein 3, SMC-3, Basement membrane-associated chondroitin proteoglycan, Bamacan, Chondroitin sulfate proteoglycan 6, Chromosome segregation protein SmcD, Mad member-interacting protein 1, Smc3, Bam, Bmh, Cspg6, Mmip1, Smc3l1, Smcd

**Storage Conditions**

-20°C

**Smc3 (13R9) Rat Monoclonal Antibody - Protein Information****Name** Smc3**Synonyms** Bam, Bmh, Cspg6, Mmip1, Smc3l1, Smcd**Function**

Central component of cohesin, a complex required for chromosome cohesion during the cell cycle. The cohesin complex may form a large proteinaceous ring within which sister chromatids can be trapped. At anaphase, the complex is cleaved and dissociates from chromatin, allowing sister chromatids to segregate. Cohesion is coupled to DNA replication and is involved in DNA repair. The cohesin complex also plays an important role in spindle pole assembly during mitosis and in chromosomes movement.

**Cellular Location**

Nucleus. Chromosome. Chromosome, centromere. Note=Associates with chromatin. Before prophase it is scattered along chromosome arms During prophase, most of cohesin complexes dissociate from chromatin probably because of phosphorylation by PLK, except at centromeres, where cohesin complexes remain. At anaphase, the RAD21 subunit of the cohesin complex is cleaved, leading to the dissociation of the complex from chromosomes, allowing chromosome separation. The phosphorylated form at Ser-1083 is preferentially associated with unsynapsed chromosomal regions

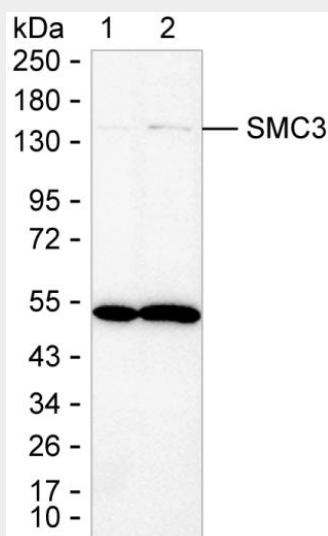
**Tissue Location**

Spermatocytes (at protein level). Widely expressed, with higher expression in testis and brain

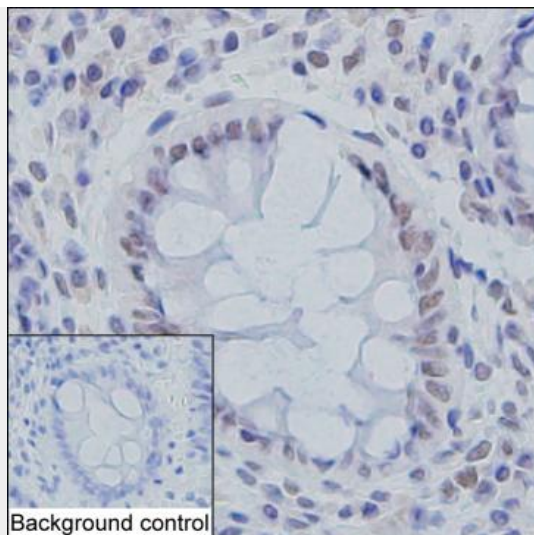
**Smc3 (13R9) Rat Monoclonal Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Smc3 (13R9) Rat Monoclonal Antibody - Images**

15  $\mu$ g of mouse testicles lysate and 15  $\mu$ g of NIH/3T3 lysate were run on 6-18% SDS- PAGE under reducing conditions and blotted onto nitrocellulose membrane. AP93634 at 1  $\mu$ g/mL was used as the primary antibody and peroxidase conjugated goat anti-mouse IgG was used as the secondary antibody. SMC3 band was visualized using ECL Western Blotting Substrate. Result: AP93634 can detect SMC3 by Western blotting.



IHC-P analysis of human colon tissue by anti-SMC3 antibody (AP93634). IHC-P was performed using sections of the formalin-fixed paraffin-embedded human colon tissue. Antigen was retrieved through addition of boiling Tris/EDTA buffer pH 9 in a pressure cooker for 3 min. Endogenous peroxidase activity was quenched by incubating the sections with 3% H<sub>2</sub>O<sub>2</sub> for 30 min at room temperature. The sections were then incubated with anti-SMC3 primary antibody (AP93634) at 5 µg/mL at room temperature for 1 h. Poly-peroxidase conjugated goat anti-mouse IgG (which cross reacts with rat IgG) was used as the secondary antibody. Diaminobenzidine was used as the chromogen. The section was counterstained with hematoxylin. A tissue section incubated with phosphate- buffered saline followed by incubation with the secondary antibody was used as the background control. Result: Partial cells are positively stained at the nuclei.