

SMC5 Antibody (Internal region)
Peptide-affinity purified goat antibody
Catalog # AF2971a**Specification**

SMC5 Antibody (Internal region) - Product Information

Application	IF, FC
Primary Accession	Q8IY18
Other Accession	NP_055925.2 , 23137 , 226026 (mouse) , 293967 (rat)
Predicted Host	Human, Mouse, Rat, Dog, Cow
Clonality	Goat
Concentration	Polyclonal
Isotype	0.5 mg/ml
Calculated MW	IgG
	128806

SMC5 Antibody (Internal region) - Additional Information**Gene ID** 23137**Other Names**

Structural maintenance of chromosomes protein 5, SMC protein 5, SMC-5, hSMC5, SMC5, KIAA0594, SMC5L1

Format

0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

SMC5 Antibody (Internal region) is for research use only and not for use in diagnostic or therapeutic procedures.

SMC5 Antibody (Internal region) - Protein Information**Name** SMC5**Synonyms** KIAA0594, SMC5L1**Function**

Core component of the SMC5-SMC6 complex, a complex involved in repair of DNA double-strand breaks by homologous recombination. The complex may promote sister chromatid homologous recombination by recruiting the SMC1-SMC3 cohesin complex to double-strand breaks. The complex is required for telomere maintenance via recombination in ALT (alternative lengthening of

telomeres) cell lines and mediates sumoylation of shelterin complex (telosome) components which is proposed to lead to shelterin complex disassembly in ALT-associated PML bodies (APBs). Required for recruitment of telomeres to PML nuclear bodies. Required for sister chromatid cohesion during prometaphase and mitotic progression; the function seems to be independent of SMC6. SMC5-SMC6 complex may prevent transcription of episomal DNA, such as circular viral DNA genome (PubMed:26983541).

Cellular Location

Nucleus. Chromosome {ECO:0000250|UniProtKB:Q8CG46}. Nucleus, PML body. Chromosome, telomere. Note=Associates with chromatin (PubMed:25931565). Colocalizes with SMC6 on the X-Y chromosome pair within the sex vesicle during late pachytene/diplotene (By similarity) Localizes to PML nuclear bodies in ALT cell lines (PubMed:17589526) Accumulates with RAD18 and the SLF1-SLF2 complex at replication-coupled DNA interstrand repair and DNA double-strand breaks (DSBs) sites on chromatin in a ubiquitin-dependent manner (PubMed:25931565) {ECO:0000250|UniProtKB:Q8CG46, ECO:0000269|PubMed:25931565}

Tissue Location

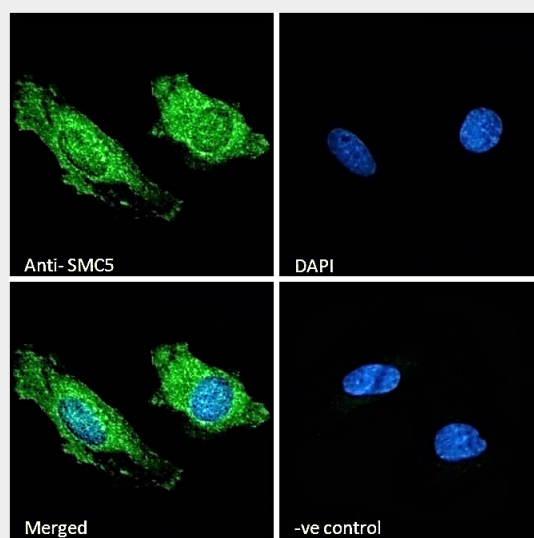
Widely expressed (PubMed:11408570). Strongly expressed in testis (PubMed:11408570).

SMC5 Antibody (Internal region) - Protocols

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

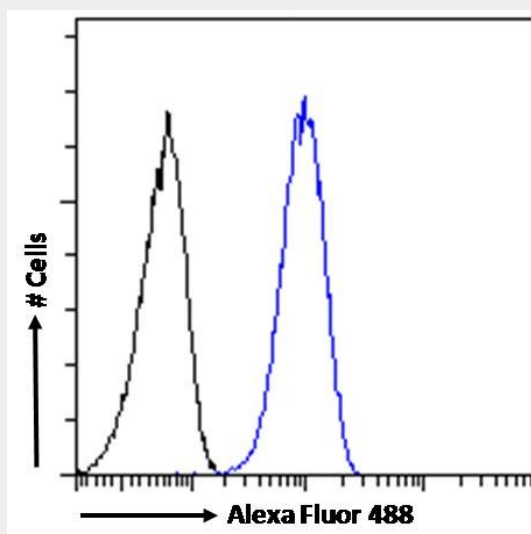
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SMC5 Antibody (Internal region) - Images



EB09424 Immunofluorescence analysis of paraformaldehyde fixed HeLa cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody

(2ug/ml), showing speckled nuclear and cytoplasmic staining. The nuc



EB09424 Flow cytometric analysis of paraformaldehyde fixed HeLa cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10ug/ml) followed by Alexa Fluor 488 secondary antibody (1ug/ml). IgG control: Unimmunized goat IgG (black line) fol

SMC5 Antibody (Internal region) - References

Nse1 RING-like domain supports functions of the Smc5-Smc6 holocomplex in genome stability. Pebernard S, Perry JJ, Tainer JA, Boddy MN. Mol Biol Cell. 2008 Oct;19(10):4099-109. PMID: 18667531