

For Research Use Only

# SMC1A Monoclonal antibody

Catalog Number: 66987-1-Ig **2 Publications**



## Basic Information

<b>Catalog Number:</b> 66987-1-Ig	<b>GenBank Accession Number:</b> BC112127	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 150ul , Concentration: 1900 ug/ml by Nanodrop and 1000 ug/ml by Bradford method using BSA as the standard;	<b>GeneID (NCBI):</b> 8243	<b>CloneNo.:</b> 1A5D2
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> Q14683	<b>Recommended Dilutions:</b> WB 1:1000-1:6000 IHC 1:150-1:600
<b>Isotype:</b> IgG2b	<b>Full Name:</b> structural maintenance of chromosomes 1A	
<b>Immunogen Catalog Number:</b> AG17257	<b>Calculated MW:</b> 1233 aa, 143 kDa	
	<b>Observed MW:</b> 150 kDa	

## Applications

<b>Tested Applications:</b> WB, IHC, FC (Intra), ELISA	<b>Positive Controls:</b>
<b>Cited Applications:</b> WB	<b>WB :</b> HeLa cells, HEK-293 cells, HepG2 cells, Jurkat cells, HSC-T6 cells, NIH/3T3 cells, 4T1 cells
<b>Species Specificity:</b> human, mouse, rat	<b>IHC :</b> human colon cancer tissue,
<b>Cited Species:</b> human, mouse	
<b>Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0</b>	

## Background Information

Structural maintenance of chromosomes protein 1A (SMC1A) is involved in chromosome cohesion during cell cycle and in DNA repair. It is a central component of cohesin complex which is required for the cohesion of sister chromatids after DNA replication. The cohesin complex apparently forms 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. The cohesin complex may also play a role in spindle pole assembly during mitosis. Involved in DNA repair via its interaction with BRCA1 and its related phosphorylation by ATM, or via its phosphorylation by ATR. Works as a downstream effector both in the ATM/NBS1 branch and in the ATR/MSH2 branch of S-phase checkpoint.

## Notable Publications

Author	Pubmed ID	Journal	Application
Jiayan Fan	31451355	Mol Ther	WB
Wanzhi Cai	39172275	Cell Mol Life Sci	WB

## Storage

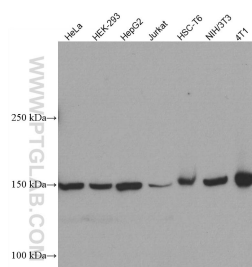
**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.  
**Aliquoting is unnecessary for -20°C storage**

\*\*\* 20ul sizes contain 0.1% BSA

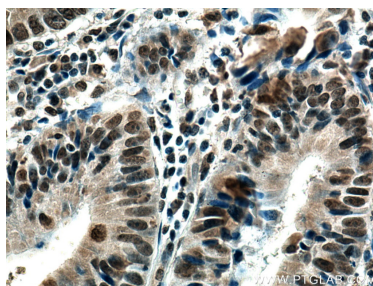
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)  
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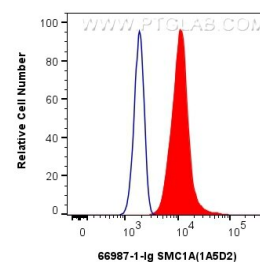
## Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 66987-1-Ig (SMC1A antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 66987-1-Ig (SMC1A antibody) at dilution of 1:300 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



$1 \times 10^6$  HeLa cells were intracellularly stained with 0.25  $\mu$ g SMC1A Monoclonal antibody (66987-1-Ig, Clone: 1A5D2) and CoraLite® 488-Conjugated Goat Anti-Mouse IgG(H+L) (SA00013-1)(red), or 0.25  $\mu$ g Mouse IgG2b isotype control Mouse McAb (66360-3-Ig, Clone: 11B8C4) (blue). Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011).