



## Rabbit Anti-SMC1A monoclonal antibody, clone TO31-38 (DCABH-192)

This product is for research use only and is not intended for diagnostic use.

### PRODUCT INFORMATION

<b>Target</b>	SMC1
<b>Immunogen</b>	Recombinant protein
<b>Isotype</b>	IgG
<b>Source/Host</b>	Rabbit
<b>Species Reactivity</b>	Human, Mouse, Rat
<b>Clone</b>	TO31-38
<b>Purification</b>	Protein A purified.
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	WB, ICC/IF, IHC
<b>Molecular Weight</b>	143 kDa
<b>Cellular Localization</b>	Nucleus, Chromosome.
<b>Positive Control</b>	NIH/3T3, A431, HeLa, SW480, human tonsil tissue, mouse colon tissue, human breast carcinoma tissue.
<b>Format</b>	Liquid
<b>Size</b>	100 µl
<b>Buffer</b>	1×TBS (pH7.4), 1% BSA, 40% Glycerol.

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<b>Preservative</b>	0.05% Sodium Azide
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<b>Storage</b>	Store at +4°C after thawing. Aliquot store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
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## BACKGROUND

**Introduction** The SMC (structural maintenance of chromosomes) family of proteins form heterodimeric complexes that modulate sister chromatid cohesion and chromosome condensation for mitosis. SMC1 $\alpha$  (structural maintenance of chromosomes protein 1A), also known as SMC1, SMCB, CDLS2, SB1.8, SMC1L1 or DXS423E, is a 1,233 amino acid nuclear protein that is involved in chromosome cohesion during the cell cycle. SMC1 $\alpha$  interacts with BRCA1 and is phosphorylated by ATM, indicating a potential role in DNA repair. SMC1 $\alpha$  is a component of the cohesion complex, which is required for the cohesion of sister chromatids after DNA replication. Mutations in the gene encoding SMC1 $\alpha$  may be the cause of Cornelia de Lange syndrome (CdLS), which is a clinically heterogeneous developmental disorder characterized by facial dysmorphism, upper limb malformations, growth and cognitive retardation.

**Keywords** CDLS2;DKFZp686L19178;DXhXs423e;DXS423E;KIAA0178;MGC138332;OTTHUMP00000061876;RP629D12.1;SB1.8;Segregation of mitotic chromosomes 1;Segregation of mitotic chromosomes like 1;SMC 1;SMC protein 1B;SMC-1-beta;SMC-1B;SMC1;SMC1A;SMC1alpha;SMC1alpha protein;SMC1B;SMC1B\_HUMAN;SMC1BETA;SMC1beta protein;SMC1L1;SMC1L2;SMCB;Structural maintenance of chromosome 1 like 1 protein;Structural maintenance of chromosome 1 like 2 protein;Structural maintenance of chromosomes 1A;Structural maintenance of chromosomes 1B;Structural maintenance of chromosomes protein 1B antibody