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Rabbit Anti-phospho-SMC1 (Ser966) antibody

SL19927R

Product Name:	phospho-SMC1 (Ser966)
Chinese Name:	磷酸化染色体结构维持蛋白质1抗体
Alias:	SMC1 (phospho S966); p-SMC1 (phospho S966); CDLS2; DKFZp686L19178; DXhXs423e; DXS423E; KIAA0178; MGC138332; OTTHUMP00000061876; RP6 29D12.1; 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.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,Sheep,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500（Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	136kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthesised phosphopeptide derived from human SMC1 around the phosphorylation site of Ser966.:SG(p-S)QR
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year

	when kept at -20°C. 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.
PubMed:	PubMed
Product Detail:	Proper cohesion of sister chromatids is a prerequisite for the correct segregation of chromosomes during cell division. The cohesin multiprotein complex is required for sister chromatid cohesion. This complex is composed partly of two structural maintenance of chromosomes (SMC) proteins, SMC3 and either SMC1B or the protein encoded by this gene. Most of the cohesin complexes dissociate from the chromosomes before mitosis, although those complexes at the kinetochore remain. Therefore, the encoded protein is thought to be an important part of functional kinetochores. In addition, this protein interacts with BRCA1 and is phosphorylated by ATM, indicating a potential role for this protein in DNA repair. This gene, which belongs to the SMC gene family, is located in an area of the X-chromosome that escapes X inactivation. Mutations in this gene result in Cornelia de Lange syndrome. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2013] **Function:** Involved in chromosome cohesion during cell cycle and in DNA repair. Central component of cohesin complex. The cohesin complex 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. **Subunit:** Interacts with POLE. Interacts with SYCP2. Interacts with BRCA1. Found in a complex with CDCA5, SMC3 and RAD21, PDS5A/APRIN and PDS5B/SCC-112 (By similarity). Forms a heterodimer with SMC3 in cohesin complexes. Cohesin complexes are composed of the SMC1 (SMC1A or SMC1B) and SMC3 heterodimer attached via their hinge domain, RAD21 which link them, and one STAG protein (STAG1, STAG2 or STAG3), which interacts with RAD21. In germ cell cohesin complexes, SMC1A is mutually exclusive with SMC1B. Interacts with BRCA1. Interacts with NDC80. Interacts with RPGR (By similarity). **Subcellular Location:** Nucleus. Chromosome. Chromosome, centromere, kinetochore. **Tissue Specificity:** The disease is caused by mutations affecting the gene represented in this entry. Disease description:A form of Cornelia de Lange syndrome, a clinically heterogeneous developmental disorder associated with malformations affecting multiple systems.

Characterized by facial dysmorphisms, abnormal hands and feet, growth delay, cognitive retardation, hirsutism, gastroesophageal dysfunction and cardiac, ophthalmologic and genitourinary anomalies.

Post-translational modifications:
Phosphorylated by ATM upon ionizing radiation in a NBS1-dependent manner. Phosphorylated by ATR upon DNA methylation in a MSH2/MSH6-dependent manner. Phosphorylation of Ser-957 and Ser-966 activates it and is required for S-phase checkpoint activation.

Similarity:
Belongs to the SMC family. SMC1 subfamily.

SWISS:
Q14683

Gene ID:
27127

Database links:

Entrez Gene: 27127 Human

Entrez Gene: 8243 Human

Entrez Gene: 140557 Mouse

Entrez Gene: 24061 mouse

Omim: 300040 HumanOmim: 608685 Human

SwissProt: Q14683 Human

SwissProt: Q8NDV3 Human

SwissProt: Q920F6 Mouse

SwissProt: Q9CU62 Mouse

Unigene: 334176 Human

Unigene: 182737 Mouse

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
