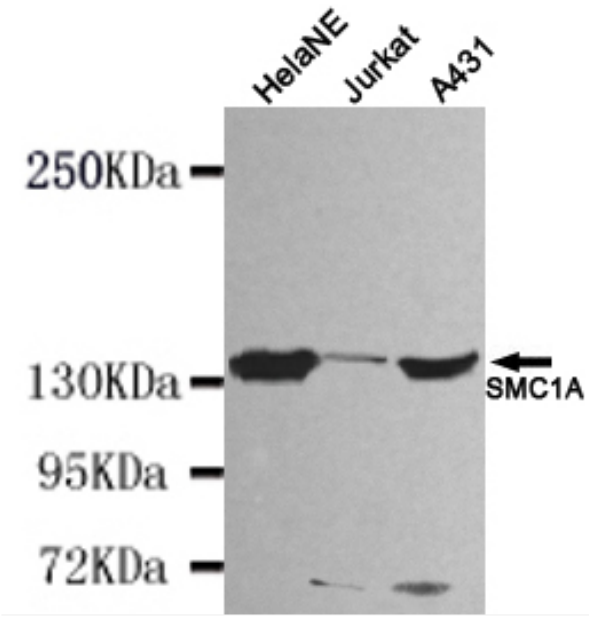
SMC1A(N-term) mouse mAb

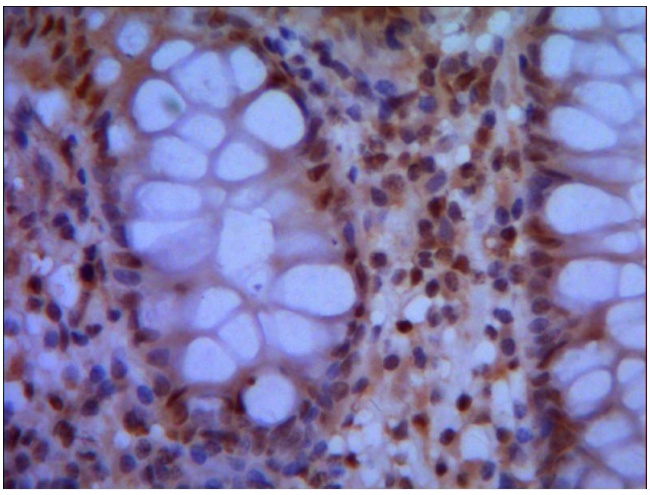
Catalog No	BYab-01070
Isotype	IgG
Reactivity	Human
Applications	WB;IHC;FC
Gene Name	smc1a
Protein Name	
Immunogen	Purified recombinant human SMC1A(N-terminus) protein fragments expressed in E.coli.
Specificity	This antibody detects endogenous levels of SMC1A (N-terminus) and does not cross-react with related proteins.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Monoclonal, Mouse
Purification	The antibody was affinity-purified from mouse ascites by affinity-chromatography using epitope-specific immunogen.
Dilution	wb 1:1000 fcm 1:100
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	Chromosome segregation protein SmcB;DXS423E;KIAA0178;MGC138332;Sb1.8;Segregation of mitotic chromosomes 1;SMC protein 1A;SMC-1-alpha;SMC-1A;SMC1 (structural maintenance of chromosomes 1 yeast) like 1;SMC1;SMC1 structural maintenance of chromosomes 1 like 1;SMC1A;SMC1A_HUMAN;SMC1alpha;SMC1L1;SMCB;Structural maintenance of chromosomes 1A;Structural maintenance of chromosomes protein 1A.
Observed Band	143kD
Cell Pathway	Nucleus . Chromosome . Chromosome, centromere, kinetochore . 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. In germ cells, cohesin complex dissociates from chromatin at prophase I, and may be replaced by a meiosis-specific cohesin

	complex. The phosphorylated form on Ser-957 and Ser-966 associates with chromatin during G1/S/G2 phases but not during M phase, suggesting that phosphorylation does not regulate cohesin function. Integral co
Tissue Specificity	Aorta,Bone marrow,Brain,Epithelium,Fibroblast,Testis,Uterus endothe
Function	disease:Defects in SMC1A are the cause of Cornelia de Lange syndrome type 2 (CDLS2) [MIM:300590]; also known as Cornelia de Lange syndrome X-linked. CDLS is a clinically heterogeneous developmental disorder associated with malformations affecting multiple systems. CDLS is characterized by facial dysmorphisms, abnormal hands and feet, growth delay, cognitive retardation and various other malformations including gastroesophageal dysfunction and cardiac, ophthalmologic and genitourinary anomalies.,domain:The flexible hinge domain, which separates the large intramolecular coiled coil regions, allows the heterotypic interaction with the corresponding domain of SMC3, forming a V-shaped heterodimer. The two heads of the heterodimer are then connected by different ends of the cleavable RAD21 protein, forming a ring structure.,function:Involved in chromosome cohesion during cell cycle and in DNA
Background	structural maintenance of chromosomes 1A(SMC1A) Homo sapiens 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. Altern
matters needing attention	Avoid repeated freezing and thawing!
Usage suggestions	This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

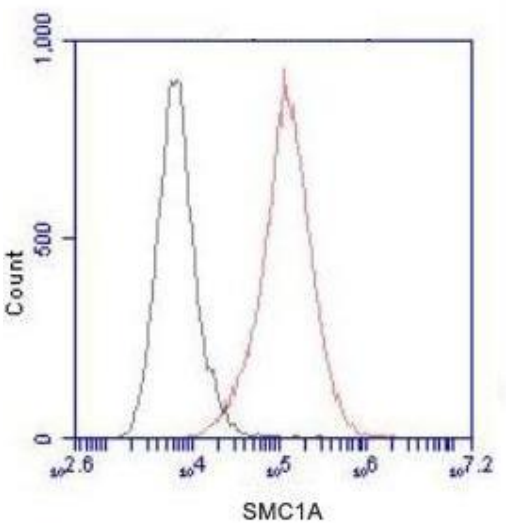
Products Images



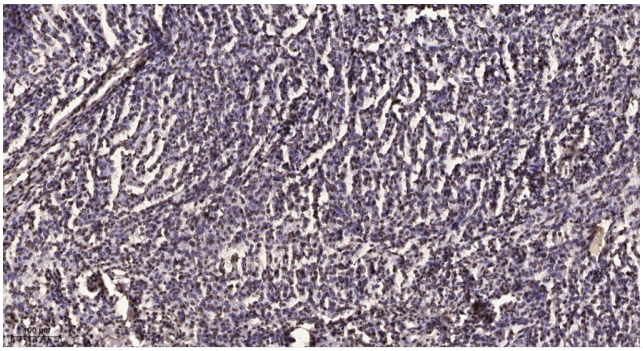
Western blot detection of SMC1A(N-terminus) in HelaNE,Jurkat and A431 cell lysates using SMC1A (N-terminus) mouse mAb (1:1000 diluted).Predicted band size: 143KDa.Observed band size: 143KDa.



IHC of paraffin-embedded human colon using anti-SMC1A (N-terminus) mouse mAb diluted 1/500-1/1000.



Flow Cytometry analysis of HeLa cells stained with SMC1A (N-terminus) (red, 1/100 dilution), followed by FITC-conjugated goat anti-mouse IgG. Black line histogram represents the isotype control, normal mouse IgG.



Immunohistochemical analysis of paraffin-embedded human brain tumor. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).