

Anti-SMC1 SMC1A Rabbit Monoclonal Antibody
Catalog # ABO13449**Specification**

Anti-SMC1 SMC1A Rabbit Monoclonal Antibody - Product Information

Application	WB, IHC, IF, ICC
Primary Accession	Q14683
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-SMC1 SMC1A Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

Anti-SMC1 SMC1A Rabbit Monoclonal Antibody - Additional Information

Gene ID 8243

Other Names

Structural maintenance of chromosomes protein 1A, SMC protein 1A, SMC-1-alpha, SMC-1A, Sb1.8, SMC1A, DXS423E, KIAA0178, SB1.8, SMC1, SMC1L1

Calculated MW

143233 MW KDa

Application Details

WB 1:1000-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200

Subcellular Localization

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 component of the functional centromere- kinetochore complex at the kinetochore region during mitosis.

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human SMC1

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-SMC1 SMC1A Rabbit Monoclonal Antibody - Protein Information**Name** SMC1A**Synonyms** DXS423E, KIAA0178, SB1.8, SMC1, SMC1L1**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.

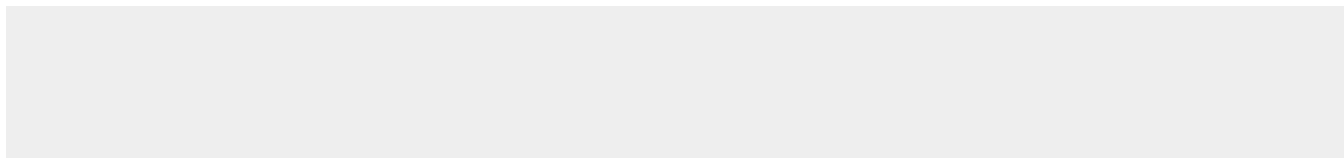
Cellular Location

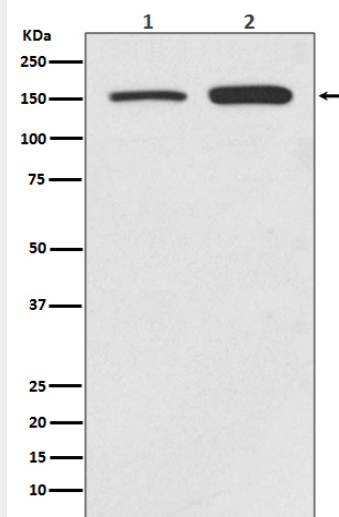
Nucleus. Chromosome. Chromosome, centromere, kinetochore. Note=Associates with chromatin. Before prophase it is scattered along chromosome arms. During prophase, most of cohesin complexes dissociate from chromatin probably because of phosphorylation by PLK, except at centromeres, where cohesin complexes 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 component of the functional centromere- kinetochore complex at the kinetochore region during mitosis

Anti-SMC1 SMC1A Rabbit Monoclonal Antibody - 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](#)

Anti-SMC1 SMC1A Rabbit Monoclonal Antibody - Images



Western blot analysis of SMC1 expression in (1) HeLa cell lysate; (2) Jurkat cell lysate.