

Datasheet for ABIN6972754
anti-SMC1A antibody (C-Term)



[Go to Product page](#)

3 Images

Overview

| | |
|----------------------|---|
| Quantity: | 100 µL |
| Target: | SMC1A |
| Binding Specificity: | C-Term |
| Reactivity: | Human |
| Host: | Rabbit |
| Clonality: | Polyclonal |
| Application: | Western Blotting (WB), Immunoprecipitation (IP), ChIP DNA-Sequencing (ChIP-seq) |

Product Details

| | |
|------------------|--|
| Immunogen: | This SMC-α antibody was raised against a peptide within the C-terminal region of human SMC1-α. |
| Isotype: | IgG |
| Characteristics: | <p>The Structural Maintenance of Chromosomes (SMC) family proteins play critical roles in various nuclear events that require structural changes of chromosomes, including mitotic chromosome organization, DNA recombination and repair and global transcriptional repression. SMC1 has a myosin-like ATPase domain that serves as a molecular motor to help organize chromatin and is part of the cohesin complex that facilitates chromosome cohesion during the cell cycle. SMC1 and SMC3 form a heterodimeric complex required for metaphase progression in mitotic cells. SMC1 is also involved in DNA damage repair. Subsequent to double strand DNA breaks, SMC1 is phosphorylated by the ATM kinase. Phosphorylated SMC1 is crucial to the successful repair of DNA damage. Defects in SMC1 isoform A are the cause of Cornelia de Lange syndrome type 2, an inherited developmental disorder associated with malformations</p> |

Product Details

affecting multiple systems. SMC1-a antibody (pAb) was raised in a Rabbit host. It has been validated for use in ChIP-Seq, Immunoprecipitation and Western blot, it has been shown to react with Human samples.

Purification: Affinity Purified

Target Details

Target: SMC1A

Alternative Name: SMC1- α ([SMC1A Products](#))

Molecular Weight: 160 kDa

NCBI Accession: [NP_006297](#)

Pathways: [Stem Cell Maintenance](#)

Application Details

Application Notes: Optimal working dilution should be determined by the investigator.

Restrictions: For Research Use only

Handling

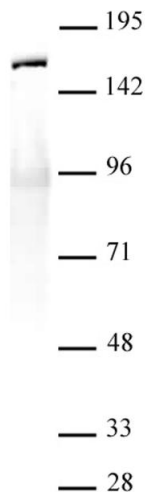
Buffer: Purified IgG in 70 mM Tris (pH 8), 105 mM NaCl, 31 mM glycine, 0.07 mM EDTA, 30 % glycerol and 0.035 % sodium azide.

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

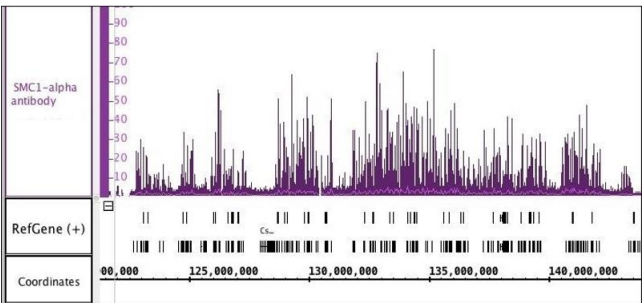
Storage: -20 °C

Storage Comment: Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at - 20°C for up to 2 years. Keep all reagents on ice when not in storage.



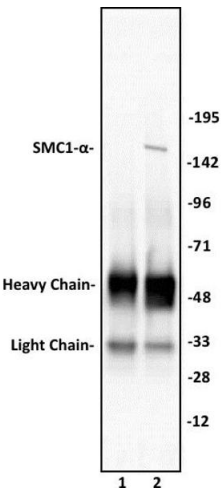
Western Blotting

Image 1. SMC1-a antibody (pAb) tested by Western blot. Nuclear extract (20 µg) of HeLa cells probed with SMC1-a antibody at a dilution of 1:5,000.



ChIP DNA-Sequencing

Image 2. SMC1-a antibody (pAb) tested by ChIP-Seq. Chromatin immunoprecipitation (ChIP) was performed using the ChIP-IT High Sensitivity Kit with 15 µg of chromatin from mouse bone marrow cell chromatin and 4 µg SMC1-a antibody. ChIP DNA was sequenced on the Illumina HiSeq and 6.9 million sequence tags were mapped to identify SMC1-a binding sites.



Immunofluorescence

Image 3. SMC1- a antibody (pAb) tested by Immunoprecipitation. 10 µL of SMC1- a antibody was used to immunoprecipitate SMC1- a from 250 µg of HeLa nuclear cell extract (lane 2). 10 µL of rabbit IgG was used as a negative control (lane 1). The immunoprecipitated protein was detected by Western blotting using the SMC1- a antibody at a dilution of 1:5,000.