

# Anti-SMC1A antibody [EP2879Y] ab75819

重组 RabMAb

## 1 References 3 图像

### 概述

产品名称	Anti-SMC1A抗体[EP2879Y]
描述	兔单克隆抗体[EP2879Y] to SMC1A
宿主	Rabbit
经测试应用	<b>适用于:</b> WB, ICC/IF <b>不适用于:</b> Flow Cyt, IHC-P or IP
种属反应性	<b>与反应:</b> Mouse, Human
免疫原	Synthetic peptide within Human SMC1A (C terminal). The exact sequence is proprietary.
阳性对照	HeLa, 293T and NIH3T3 cell lysates; HeLa cells.
常规说明	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.</p>

### 性能

形式	Liquid
存放说明	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
存储溶液	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
纯度	Tissue culture supernatant
克隆	单克隆

克隆编号 EP2879Y  
同种型 IgG

## 应用

**The Abpromise guarantee** **Abpromise™**承诺保证使用ab75819于以下的经测试应用

“应用说明”部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
WB		1/500 - 1/1000. Detects a band of approximately 143 kDa (predicted molecular weight: 143 kDa).
ICC/IF		1/100 - 1/250.

应用说明 Is unsuitable for Flow Cyt, IHC-P or IP.

## 靶标

**功能** 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.

**疾病相关** 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.

**序列相似性** Belongs to the SMC family. SMC1 subfamily.

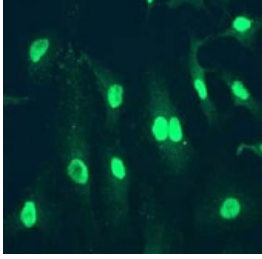
**结构域** The flexible hinge domain, which separates the large intramolecular coiled coil regions, allows the heterotypic interaction with the corresponding domain of SMC3, forming a V-shaped heterodimer. The two heads of the heterodimer are then connected by different ends of the cleavable RAD21 protein, forming a ring structure.

**翻译后修饰** 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.

**细胞定位** 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-

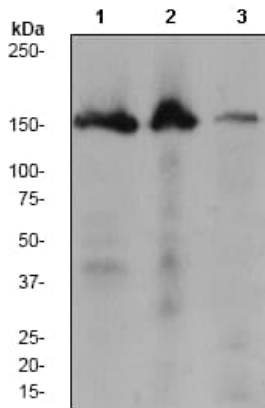
957 and Ser-966 associates with chromatin during G1/S/G2 phases but not during M phase, suggesting that phosphorylation does not regulate cohesin function. Integral component of the functional centromere-kinetochore complex at the kinetochore region during mitosis.

## 图片



Immunocytochemistry/ Immunofluorescence - Anti-SMC1A antibody [EP2879Y] (ab75819)

ab75819 at 1/100 dilution staining SMC1A in HeLa cells by Immunofluorescence.



Western blot - Anti-SMC1A antibody [EP2879Y] (ab75819)

**All lanes** : Anti-SMC1A antibody [EP2879Y] (ab75819) at 1/500 dilution

**Lane 1** : HeLa cell lysate

**Lane 2** : 293T cell lysate

**Lane 3** : NIH3T3 cell lysate

Lysates/proteins at 10  $\mu$ g per lane.



### Secondary

**All lanes** : goat anti-rabbit HRP at 1/2000 dilution

**Predicted band size:** 143 kDa

**Observed band size:** 143 kDa

Why choose a recombinant antibody?

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

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**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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