

### Anti-SMC1A antibody [BL-205-2G8] ab243875

リコンビナント

#### 2 References [画像数 5](#)

#### 製品の概要

製品名	Anti-SMC1A antibody [BL-205-2G8]
製品の詳細	Rabbit monoclonal [BL-205-2G8] to SMC1A
由来種	Rabbit
アプリケーション	<b>適用あり:</b> ICC, IHC-P, IP, WB
種交差性	<b>交差種:</b> Mouse, Human
免疫原	Synthetic peptide within Human SMC1A aa 1200-1233 (C terminal). The exact sequence is proprietary. NP_006297.2 and Gene ID 8243. Database link: <a href="#">Q14683</a>
ポジティブ・コントロール	WB: HeLa, HEK-293T, MCF7, HepG2, A549, SW620, SK, Jurkat, TCMK-1, NIH/3T3, CT26 whole cell lysates. IP: HEK-293T whole cell lysate. ICC: HCT-116 cells. IHC-P: Human Breast carcinoma tissue.
特記事項	This product is sold under License from Bethyl Laboratories, Inc.

#### 製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
バッファー	pH: 7.8 Preservative: 0.09% Sodium azide Constituents: 98% Borate buffered saline, 0.1% BSA
特記事項(精製)	Recombinant antibody was purified from cell culture supernatant.
ポリ/モノ	モノクローナル
クローン名	BL-205-2G8
アイソタイプ	IgG

#### アプリケーション

## The Abpromise guarantee

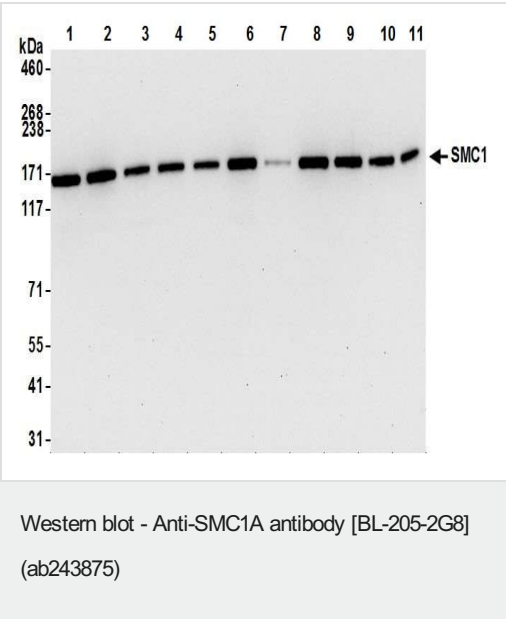
**Abpromise保証は、次のテスト済みアプリケーションにおけるab243875の使用に適用されます**

アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご確認ください。

アプリケーション	Abreviews	特記事項
ICC		1/100 - 1/500.
IHC-P		1/100 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IP		Use at an assay dependent concentration. Use 20µl/mg lysate.
WB		1/1000.

## ターゲット情報

機能	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.
関連疾患	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.
配列類似性	Belongs to the SMC family. SMC1 subfamily.
ドメイン	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.
翻訳後修飾	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.
細胞内局在	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.



Western blot analysis using ab243875 at 1/1000 dilution.

Lane 1: HeLa whole cell lysate (15 µg).

Lane 2: HEK-293T whole cell lysate (15 µg).

Lane3: MCF7 whole cell lysate (15 µg).

Lane 4: HepG2 whole cell lysate (15 µg).

Lane 5: A549 whole cell lysate (15 µg).

Lane 6: SW620 whole cell lysate (15 µg).

Lane 7: SK whole cell lysate (15µg).

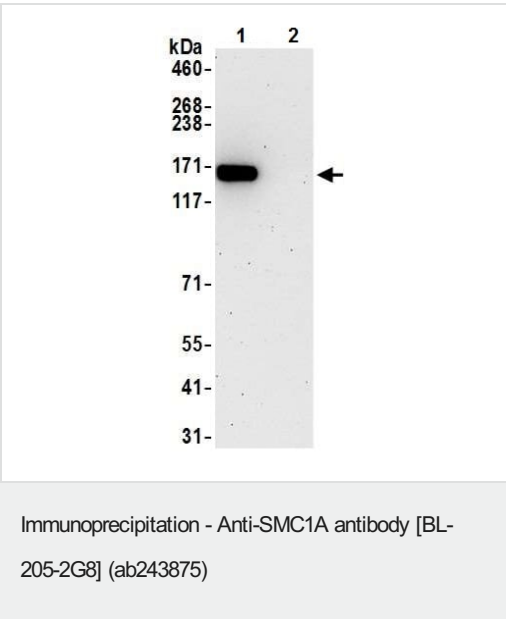
Lane 8: Jurkat whole cell lysate (15 µg).

Lane 9: TCMK-1 whole cell lysate (15 µg).

Lane 10: NIH/3T3 whole cell lysate (15 µg).

Lane 11: CT26 whole cell lysate (15 µg)

A HRP-conjugated goat anti-rabbit IgG antibody was used as the secondary. Detection: chemiluminescence with an exposure time of 10 seconds

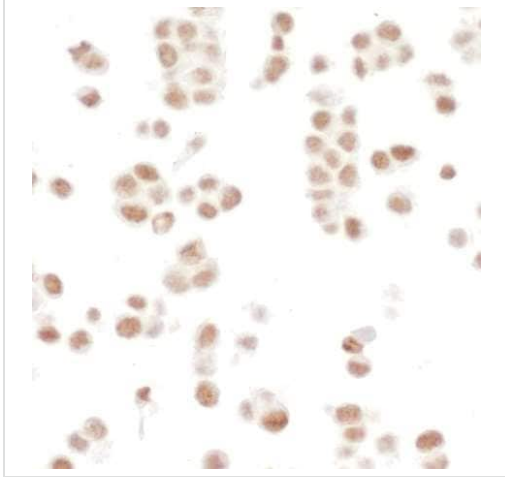


SMC1A was immunoprecipitated from 1 mg HEK-293T whole cell lysate with ab243875 at 20 µl per reaction Western blot was performed on the immunoprecipitate using ab243875 at 1/1000 dilution.

Lane 1: ab243875 IP in HEK-293T whole cell lysate.

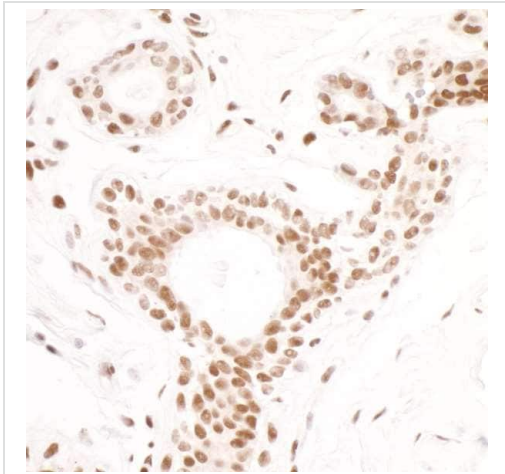
Lane 2: Contol IgG in HEK-293T whole cell lysate.

Detection: Chemiluminescence with an exposure time of 10 seconds.



Immunocytochemistry - Anti-SMC1A antibody [BL-205-2G8] (ab243875)

Formaldehyde-fixed HCT-116 (human colorectal carcinoma cell line) cells labeling SMC1A using ab243875 at 1/250 dilution in ICC analysis. A HRP-conjugated goat anti-rabbit IgG was used as the secondary antibody. DAB staining



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SMC1A antibody [BL-205-2G8] (ab243875)

Formalin-fixed, paraffin-embedded human Breast carcinoma tissue stained for SMC1A using ab243875 at 1/250 dilution in immunohistochemical analysis. A HRP-conjugated goat anti-rabbit IgG was used as the secondary. DAB staining.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



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Confirmed specificity



**Ethical standards compliant**  
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Anti-SMC1A antibody [BL-205-2G8] (ab243875)

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

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