

Datasheet: VMA00637KT

Description:	SMC1A ANTIBODY WITH CONTROL LYSATE
Specificity:	SMC1A
Format:	Purified
Product Type:	PrecisionAb™ Monoclonal
Clone:	AB01/4H4
Isotype:	IgG1
Quantity:	2 Westerns

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Western Blotting	▪			1/1000

PrecisionAb antibodies have been extensively [validated for the western blot application](#). The antibody has been validated at the suggested dilution. Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Further optimization may be required dependant on sample type.

Target Species	Human
Species Cross Reactivity	Reacts with: Mouse, Rat N.B. Antibody reactivity and working conditions may vary between species.
Product Form	Purified IgG - liquid
Preparation	20µl Mouse monoclonal antibody purified by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Immunogen	<i>E. coli</i> -derived recombinant human SMC1A (aa 837-1233)
External Database Links	<p>UniProt: Q14683 Related reagents</p> <p>Entrez Gene: 8243 SMC1A Related reagents</p>

Synonyms	DXS423E, KIAA0178, SB1.8, SMC1, SMC1L1
Specificity	<p>Mouse anti Human SMC1A antibody recognizes structural maintenance of chromosomes protein 1A, also known as SMC protein 1A, SMC-1-alpha or segregation of mitotic chromosomes 1.</p> <p>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 SMC1A. 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. SMC1A, which belongs to the SMC gene family, is located in an area of the X-chromosome that escapes X inactivation. Mutations in SMC1A result in Cornelia de Lange syndrome. Alternative splicing results in multiple transcript variants encoding different isoforms (provided by RefSeq, Jul 2013).</p> <p>Mouse anti Human SMC1A antibody detects a band of 155 kDa. The antibody has been extensively validated for western blotting using whole cell lysates.</p>
Western Blotting	Mouse anti SMC1A antibody detects a band of approximately 155 kDa in HEK293 cell lysates
Instructions For Use	Please refer to the PrecisionAb western blotting protocol . For additional information on secondary antibody dilution and exposure time see product web page.
Lysate Composition	400µg HEK293 lysate lyophilized in RIPA buffer
Lysate Reconstitution	<p>- If using DDT reconstitute the lyophilized lysate with 190µl DI H₂O, add 200µl 2x Laemmli Sample Buffer and 10µl 2M DTT.</p> <p>- If using BME reconstitute the lyophilized lysate with 180µl DI H₂O, add 200µl 2x Laemmli Sample Buffer and 20µl BME.</p> <p>Heat at 95°C for 5 minutes. For 10 well mini gels load 25µl. For other gel and comb formats please refer to the PrecisionAb western blotting protocol.</p>
Storage	<p>Antibody: Store undiluted at -20°C, avoiding repeated freeze thaw cycles.</p> <p>Lysate: Store lyophilized lysate at -20°C. After reconstitution aliquot and store at -20°C for up to 3 months or at -80°C for longer term storage.</p>
Guarantee	As supplied, 12 months from date of despatch
Acknowledgements	PrecisionAb™ is a trademark of Bio-Rad Laboratories
Health And Safety Information	<p>Material Safety Datasheet documentation #10040 #10561 available at:</p> <p>Antibody (10040): https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</p> <p>Lysate Material (10561): https://www.bio-rad-antibodies.com/uploads/MSDS/10561.pdf</p>
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (H/L) (STAR207...)[HRP](#)

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

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