

Rabbit anti-Human, Mouse SMC3 Polyclonal Antibody | anti-SMC3 antibody

SMC3 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA327220	Rabbit	Human, Mouse	ELISA, Immunohistochemistry, Western Blot

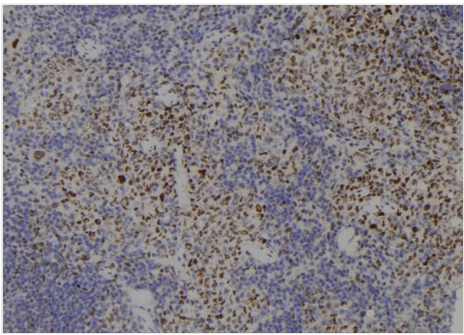
PRODUCT SYNONYMS

SMC3; Polyclonal Antibody; SMC3 Antibody; BAM; Bamacan; Basement membrane associated chondroitin proteoglycan; Basement membrane-associated chondroitin proteoglycan; BMH; CDLS3; chondroitin sulfate proteoglycan 6 (bamacan); Chondroitin sulfate proteoglycan 6; Chromosome associated polypeptide; Chromosome-associated polypeptide; CSPG 6; CSPG6; hCAP; Human chromosome associated polypeptide; im:7142991; SMC 3; SMC protein 3; SMC-3; smc3; SMC3_HUMAN; SMC3L1; Structural maintenance of chromosome 3; Structural maintenance of chromosomes 3; Structural maintenance of chromosomes protein 3; u:fb22e01; wu:fc30d07; anti-SMC3 antibody

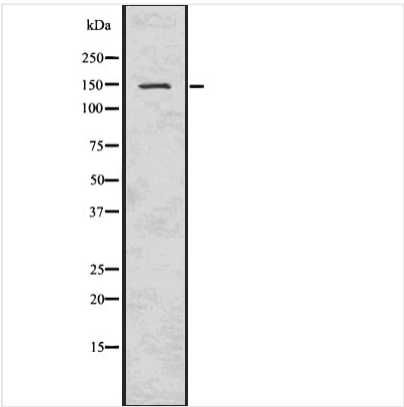
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Isotype	IgG
Specificity	SMC3 antibody detects endogenous levels of total SMC3
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1217
Applicable Applications for anti-SMC3 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human SMC3
Subcellular Location	Nucleus. Chromosome. Chromosome > Centromere. 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.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IHC (Immunohistochemistry)
AAA327220 at 1/100 staining Mouse spleen tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis SMC3 using K562 whole cell lysates

ADDITIONAL INFORMATION

Related Product Information for anti-SMC3 antibody	Function: Central component of cohesin, a complex required for chromosome cohesion during the cell cycle. The cohesin complex may form 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. Cohesion is coupled to DNA replication and is involved in DNA repair. The cohesin complex plays also an important role in spindle pole assembly during mitosis and in chromosomes movement. Subunit Structure: Forms a heterodimer with SMC1A or SMC1B in cohesin complexes (PubMed:22628566). Cohesin complexes are composed of the SMC1 (SMC1A or SMC1B) and SMC3 heterodimer attached via their hinge domain, RAD21 which link them, and one STAG protein (STAG1, STAG2 or STAG3), which interacts with RAD21. Also found in meiosis-specific cohesin complexes (PubMed:11076961). Found in a complex with SMC1A, CDCA5 and RAD21, PDS5A/SCC-112 and PDS5B/APRIN (PubMed:15837422). Interacts with NUMA1, and forms a ternary complex with KIF3B and KIFAP3, suggesting a function in tethering the chromosomes to the spindle pole and in chromosome movement (PubMed:9506951, PubMed:11590136). Interacts with PDS5A and WAPL; regulated by SMC3 acetylation (PubMed:19907496). Interacts (via central hinge region) with KIAA1328 (via N-and C-terminal domains) (PubMed:15656913). Interacts with DDX11 (PubMed:17105772). Found in a cohesin complex with SMC1A, STAG1 and RAD21 (PubMed:22628566). The SMC1A-SMC3 heterodimer interacts with the NIPBL-MAU2 heterodimer (PubMed:22628566). Interacts with MXI1, MXD3, MXD4, SYCP2, RPGR and STAG3 (By similarity). Post-translational Modifications: Phosphorylated at Ser-1083 in a SPO11-dependent manner. Acetylation at Lys-105 and Lys-106 by ESCO1 is important for genome stability and S phase sister chromatid cohesion. Regulated by DSCC1, it is required for processive DNA synthesis, coupling sister chromatid cohesion establishment during S phase to DNA replication. Deacetylation by HDAC8, regulates release of the cohesin complex from chromatin. Similarity: The flexible hinge domain, which separates the large intramolecular coiled coil regions, allows the heterotypic interaction with the corresponding domain of SMC1A or SMC1B, 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 (By similarity). Belongs to the SMC family. SMC3 subfamily.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4885399
NCBI GeneID	9126
NCBI Accession #	NP_005436.1
NCBI GenBank Nucleotide #	NM_005445.3
UniProt Accession #	Q9UQE7; O60464; Q5T482; A8K156
Molecular Weight	Observed: 142 kDa Predicted: 142 kDa
NCBI Official Full Name	structural maintenance of chromosomes protein 3
NCBI Official Synonym Full Names	structural maintenance of chromosomes 3

NCBI Official Symbol	SMC3
NCBI Official Synonym Symbols	BAM; BMH; HCAP; CDLS3; CSPG6; SMC3L1
NCBI Protein Information	structural maintenance of chromosomes protein 3
UniProt Protein Name	Structural maintenance of chromosomes protein 3
UniProt Gene Name	SMC3
UniProt Synonym Gene Names	BAM; BMH; CSPG6; SMC3L1; SMC protein 3; SMC-3; Bamacan; hCAP

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/smc3-antibody-immunohistochemistry-western-blot-elisa/327220>