

Mouse SMC3 Monoclonal Antibody | anti-SMC3 antibody

Anti-SMC3 Antibody (monoclonal, 4C12)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125143	Mouse	Human, Mouse, Rat	Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

SMC3; Monoclonal Antibody; Anti-SMC3 Antibody (monoclonal; 4C12); Structural maintenance of chromosomes protein 3; SMC protein 3; SMC-3; Basement membrane-associated chondroitin proteoglycan; Bamacan; Chondroitin sulfate proteoglycan 6; Chromosome-associated polypeptide; hCAP; BAM; BMH; CSPG6; SMC3L1; Structural maintenance of chromosomes 3; anti-SMC3 antibody

PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Isotype	IgG1
Clone Number	4C12
Specificity	No cross reactivity with other proteins.
Purity/Purification	Immunogen Affinity Purified
Form/Format	Lyophilized
Sequence Length	1,217
Applicable Applications for anti-SMC3 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human SMC3 (1178-1216aa ELLESADKFGYGVKFRNKVSHIDVITAEMAKDFVEDDTTH), identical to the related mouse sequence.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Relevant Detection Systems	It is recommended to use an Enhanced Chemiluminescent Kit with anti-Rabbit IgG for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit for IHC-P.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



WB (Western Blot)

Figure 3. Western blot analysis of SMC3 using anti-SMC3 antibody (M01930-1). Electrophoresis was performed on a 8% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human Hela whole cell lysate, Lane 2: human A549 whole cell lysate, Lane 3: human MCF-7 whole cell lysate, Lane 4: human MDA-MB-453 whole cell lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-SMC3 antigen affinity purified monoclonal antibody at 0.5 ug/ml overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system.



IHC (Immunohistochemistry)

Figure 1. IHC analysis of SMC3 using anti-SMC3 antibody (M01930-1). SMC3 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml mouse anti-SMC3 Antibody (M01930-1) overnight at 4 degree C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



WB (Western Blot)

Figure 3. Western blot analysis of SMC3 using anti-SMC3 antibody (M01930-1). Electrophoresis was performed on a 8% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human Hela whole cell lysate, Lane 2: human A549 whole cell lysate, Lane 3: human MCF-7 whole cell lysate, Lane 4: human MDA-MB-453 whole cell lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-SMC3 antigen affinity purified monoclonal antibody at 0.5 ug/ml overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system.

ADDITIONAL INFORMATION

Related Product Information for anti-SMC3 antibody	Description: Mouse IgG monoclonal antibody for SMC3 detection. Tested with WB, IHC-P in Human; Mouse; Rat. Background: Structural maintenance of chromosomes 3, also known as SMC3, is a human gene. This gene belongs to the SMC3 subfamily of SMC proteins. The encoded protein occurs in certain cell types as either an intracellular, nuclear protein or a secreted protein. The nuclear form, known as structural maintenance of chromosomes 3, is a component of the multimeric cohesin complex that holds together sister chromatids during mitosis, enabling proper chromosome segregation. Post-translational modification of the encoded protein by the addition of chondroitin sulfate chains gives rise to the secreted proteoglycan bamacan, an abundant basement membrane protein.
References	1. "Entrez Gene: SMC3 structural maintenance of chromosomes 3". 2. Ghiselli G, Coffee N, Munnery CE, Koratkar R, Siracusa LD (2003). "The cohesin SMC3 is a target the for beta-catenin/TCF4 transactivation pathway". J. Biol. Chem. 278 (22): 20259-67. 3. Patel CA, Ghiselli G (2005). "Hinderin, a five-domains protein including coiled-coil motifs that binds to SMC3". BMC Cell Biol. 6 (1): 3.

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	141,542 Da
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/monoclonal/smc3-antibody-clone-4c12-immunohistochemistry-western-blot-elisa/125143>