10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KD-Validated Anti-SMC3 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1737

Specification

KD-Validated Anti-SMC3 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q9UQE7
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 142 kDa , observed , 141 kDa KDa**
Gene Name	**SMC3**
Aliases	**SMC3; Structural Maintenance Of Chromosomes 3; SMC3L1; HCA; BAM; Bamacan; CSPG6; Basement Membrane-Associated Chondroitin Proteoglycan; Structural Maintenance Of Chromosomes Protein 3; Chondroitin Sulfate Proteoglycan 6 (Bamacan); Chromosome-Associated Polypeptide; SMC Protein 3; BMH; Chondroitin Sulfate Proteoglycan 6; Bamacan Proteoglycan; CDLS3; SMC-3**
Immunogen	**A synthesized peptide derived from human SMC3**

KD-Validated Anti-SMC3 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**9126**

Other Names
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, SMC3, BAM, BMH, CSPG6, SMC3L1

KD-Validated Anti-SMC3 Rabbit Monoclonal Antibody - Protein Information

Name SMC3

Synonyms BAM, BMH, CSPG6, SMC3L1

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 also plays an important role in spindle pole assembly during mitosis and in

chromosomes movement.

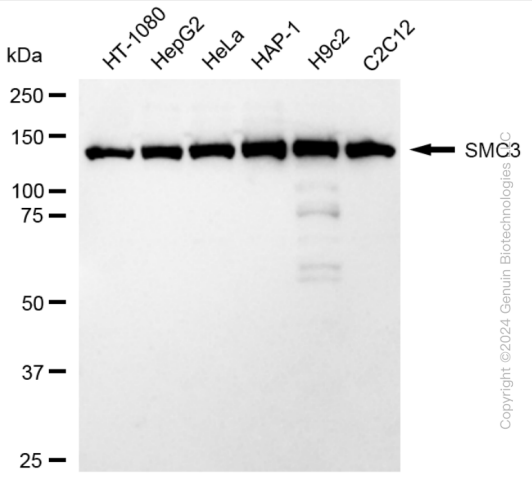
Cellular Location
Nucleus {ECO:0000250|UniProtKB:Q9CW03}. Chromosome {ECO:0000250|UniProtKB:Q9CW03}. Chromosome, centromere {ECO:0000250|UniProtKB:Q9CW03}. Note=Associates with chromatin. Before prophase it is scattered along chromosome arms. During prophase, most of cohesin complexes dissociate from 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. The phosphorylated form at Ser-1083 is preferentially associated with unsynapsed chromosomal regions (By similarity). {ECO:0000250|UniProtKB:Q9CW03}

KD-Validated Anti-SMC3 Rabbit Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

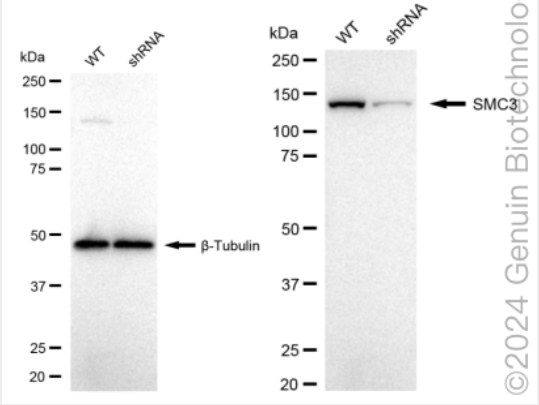
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-SMC3 Rabbit Monoclonal Antibody - Images

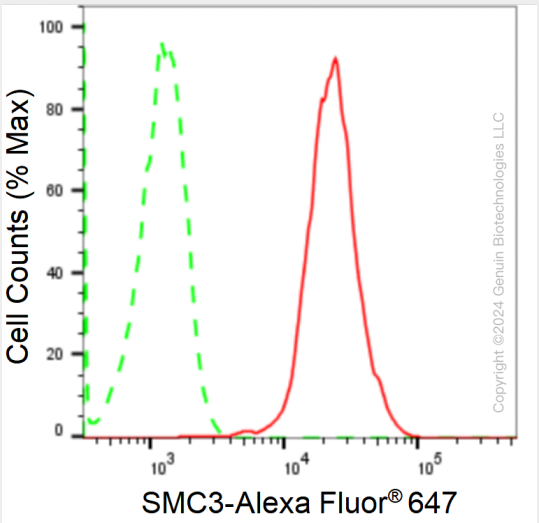


Western blotting analysis using anti-SMC3 antibody (Cat#AGI1737). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-SMC3 antibody (Cat#AGI1737, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

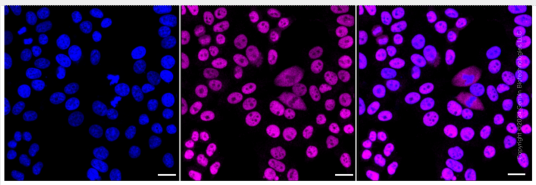
10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Western blotting analysis using anti-SMC3 antibody (Cat#AGI1737). SMC3 expression in wild type (WT) and SMC3 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-SMC3 antibody (Cat#AGI1737, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of SMC3 expression in HepG2 cells using anti-SMC3 antibody (Cat#AGI1737, 1:2,000). Green, isotype control; red, SMC3.



Immunocytochemical staining of HepG2 cells with anti-SMC3 antibody (Cat#AGI1737, 1:1,000). Nuclei were stained blue with DAPI; SMC3 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.