

Product Name: KD-Validated SMC3 Recombinant Rabbit Monoclonal Antibody**Catalog #: KVA00864**

For research use only.

Summary

Description	KO&KD-Validated antibody
Host	Rabbit
Application	WB,FCM,ICC,IHC-P
Reactivity	Human,Mouse,Rat
Conjugation	Unconjugated
Modification	Unmodified
Isotype	Rabbit IgG
Clonality	Rabbit mAb
Form	Liquid
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Supplied in PBS (pH 7.4) containing 50% glycerol, and 0.02% sodium azide.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:1,000-1:5,000; FC 1:200-1:2,000; ICC 1:100-1:1,000; IHC-P 1:100-1:200
Molecular Weight	Calculated MW: 141.5kDa

Antigen Information

Gene Name	SMC3 SMC3; Structural Maintenance Of Chromosomes 3; SMC3L1; HCA; BAM; Bamacan; CSPG6; Basement Membrane-Associated Chondroitin Proteoglycan; Structural Maintenance Of
Alternative Names	Chromosomes Protein 3; Chondroitin Sulfate Proteoglycan 6 (Bamacan); Chromosome-Associated Polypeptide; SMC Protein 3; BMH; Chondroitin Sulfate Proteoglycan 6; Bamacan Proteoglycan; CDLS3; SMC-3
Gene ID	9126.0
SwissProt ID	Q9UQE7
Immunogen	A synthesized peptide derived from human SMC3

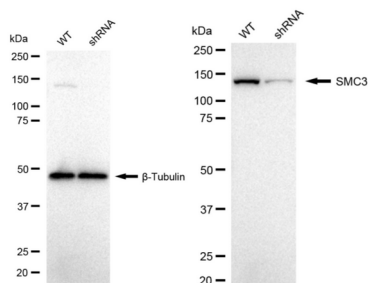
Background

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. [provided by RefSeq, Jul 2008]

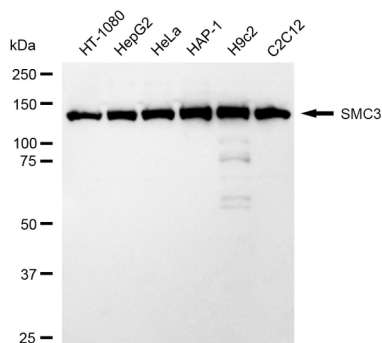
Research Area

Cell Biology, Epigenetics and Nuclear Signaling, Cancer

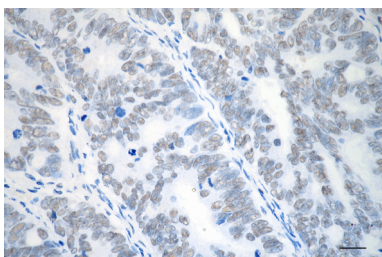
Image Data



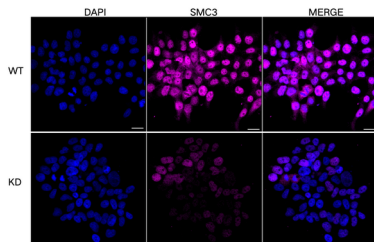
Western blotting analysis using SMC3 antibody (KVA00864). SMC3 expression in wild type (WT) and SMC3 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with SMC3 antibody (KVA00864, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



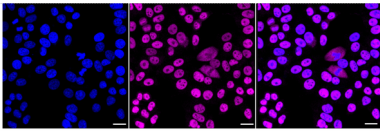
Western blotting analysis using SMC3 antibody (KVA00864). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with SMC3 antibody (KVA00864, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (APS0635, 1:10,000) respectively.



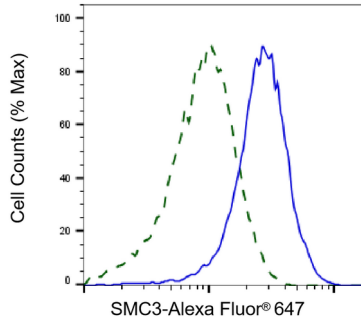
Immunohistochemistry was performed on paraffin-embedded human sigmoid colon carcinoma using SMC3 antibody (KVA00864, 1:200). Antigen retrieval was done in sodium citrate buffer (pH 6.0). DAB was used for detection, with hematoxylin counterstaining. Images were acquired using a Nikon Ci-L Plus microscope (40× objective). Scale bar: 25 µm.



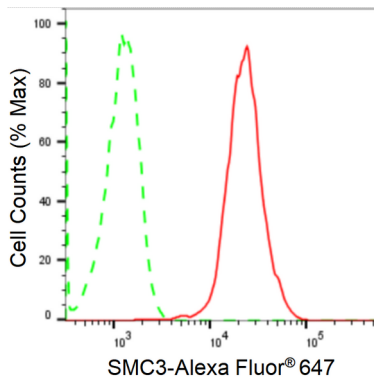
Immunocytochemical staining of HeLa cells using SMC3 antibody (KVA00864, 1:1,000). Top panel: wild-type (WT); Bottom panel: SMC3 shRNA knockdown (KD). Nuclei were stained blue with DAPI; SMC3 was stained magenta with Alexa Fluor® 647. Scale bar, 20 µm.



Immunocytochemical staining of HepG2 cells with SMC3 antibody (KVA00864, 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.



Validation of SMC3 knockdown using flow cytometry. Wild-type(WT, Blue) and knockdown(KD, Green) HeLa cells were stained with SMC3 antibody (KVA00864, 1:2,000) and analyzed using BD flow cytometer.



Flow cytometric analysis of SMC3 expression in HepG2 cells using SMC3 antibody (KVA00864, 1:2,000). Green, isotype control; red, SMC3.