Anti-SMC3 antibody

Description	Unconjugated Rabbit polyclonal to SMC3

Model	STJ190157
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human SMC3 protein.
Immunogen Region	1010-1090aa
Gene ID	9126
Gene Symbol	SMC3
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	SMC3 Polyclonal Antibody detects endogenous levels of protein.
Purification	SMC3 antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	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
Molecular Weight	133 kDa
Clonality	Polyclonal

Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid form in PBS containing 50% glycerol,and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:2468OMIM:606062
Alternative 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
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.
Sequence and Domain Family	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 .
Cellular Localization	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. The phosphorylated form at Ser-1083 is preferentially associated with unsynapsed chromosomal regions .
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.