

Product datasheet for **AM05298PU-N**

SMC1 (SMC1A) Mouse Monoclonal Antibody [Clone ID: C2M]

Product data:

Product Type:	Primary Antibodies
Clone Name:	C2M
Applications:	IF, WB
Recommended Dilution:	Western Blot (1-5 µg/ml). Immunofluorescence(5-10 µg/ml). Positive Control: HeLa cells.
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Immunogen:	Hybridoma produced by the fusion of splenocytes from mice immunized with recombinant protein corresponding to amino acids 402-894 of human SMC1 and mouse myeloma cells.
Formulation:	PBS containing 0.08% Sodium Azide as preservative. State: Purified State: Liquid purified IgG fraction.
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store the antibody at -20°C. Avoid repeated freezing and thawing.
Stability:	Shelf life: One year from despatch.
Gene Name:	structural maintenance of chromosomes 1A
Database Link:	Entrez Gene 8243 Human Q14683



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Background:

Structural Maintenance of Chromosomes (SMC) family proteins play critical roles in various nuclear events that require structural changes of chromosomes, including mitotic chromosome organization, DNA recombination and repair and global transcriptional repression. The chromosome proteins are conserved in eukaryotes lead to mitotic chromosome segregation defects, suggesting a critical function of SMC family proteins in mitotic chromosome dynamics. SMC1 and SMC3 form a heterodimeric complex required for metaphase progression in mitotic cells. Specifically this SMC1/SMC3 complex is responsible for sister chromatid cohesion during metaphase. A number of cellular factors interact with hSMC1/hSMC3 during cell cycle. The major population of hSMC1/hSMC3 is in a complex with hRAD21 forming the human cohesion complex. Human cohesion associates with chromosomes which peaks at S phase and dissociates from chromosomes during G2/M transition. In addition, a subpopulation of hSMC1/hSMC3 associates tightly with nuclear matrix and centrosomes during interphase. A subset of hSMC1/hSMC3 is localized to spindle poles, spindles and kinetochores during mitosis when cohesin is in the cytoplasm. hSMC1/hSMC3 is required for spindle aster formation in vitro and reacts with nuclear mitotic apparatus (2) protein in vivo.

Synonyms:

SMC protein 1A, SMC-1A, SMC-1-alpha, SMC1L1, DXS423E

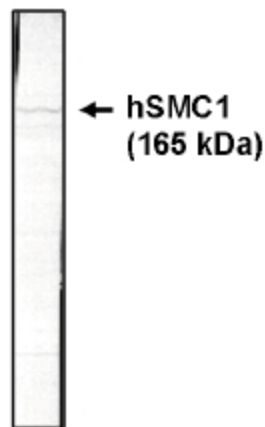
Product images:

Figure 1. Western blotting using SMC1 antibody on HeLa cell lysate at 1 ug/ml.