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SMCP Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1905a

Product Information

Application	WB, E
Primary Accession	P49901
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5C10A2
Isotype	IgG2b
Calculated MW	12767
Description	Sperm mitochondria differ in morphology and subcellular localization from those of somatic cells. They are elongated, flattened, and arranged circumferentially to form a helical coiled sheath in the midpiece of the sperm flagellum. The protein encoded by this gene localizes to the capsule associated with the mitochondrial outer membranes and is thought to function in the organization and stabilization of the helical structure of the sperm's mitochondrial sheath.
Immunogen	Purified recombinant fragment of human SMCP (AA: 1-116) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	4184
Other Names	Sperm mitochondrial-associated cysteine-rich protein, SMCP, MCS, MCSP
Dilution	WB~~1/500 - 1/2000 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SMCP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SMCP
Synonyms	MCS, MCSP

Function	Involved in sperm motility. Its absence is associated with genetic background dependent male infertility. Infertility may be due to reduced sperm motility in the female reproductive tract and inability to penetrate the oocyte zona pellucida (By similarity).
Cellular Location	Cytoplasm. Mitochondrion membrane; Peripheral membrane protein; Cytoplasmic side. Note=Becomes associated with the spermatid mitochondrion capsule at step 16 of spermatogenesis.
Tissue Location	Testis. Is selectively expressed in the spermatids of seminiferous tubules.

Background

Mutations in this gene are associated with Nijmegen breakage syndrome, an autosomal recessive chromosomal instability syndrome characterized by microcephaly, growth retardation, immunodeficiency, and cancer predisposition. The encoded protein is a member of the MRE11/RAD50 double-strand break repair complex which consists of 5 proteins. This gene product is thought to be involved in DNA double-strand break repair and DNA damage-induced checkpoint activation. ;

References

1. Biol Reprod. 1999 Aug;61(2):428-35. 2. Mol Cell Biol. 2002 May;22(9):3046-52.

Images

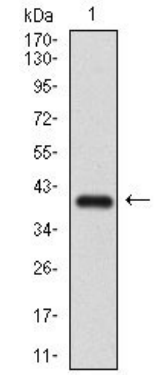

Figure 1: Western blot analysis using SMCP mAb against human SMCP (AA: 1-116) recombinant protein. (Expected MW is 38.3 kDa)

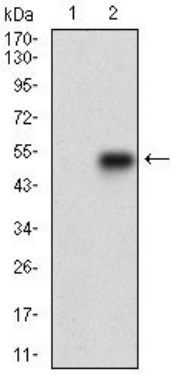

Figure 2: Western blot analysis using SMCP mAb against HEK293 (1) and SMCP (AA: 1-116)-hIgGFc transfected HEK293 (2) cell lysate.