

SMCP Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1905a**Specification****SMCP Antibody - Product Information**

Application	WB, E
Primary Accession	P49901
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	12.8kDa KDa

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.

SMCP Antibody - 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.

SMCP Antibody - 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.

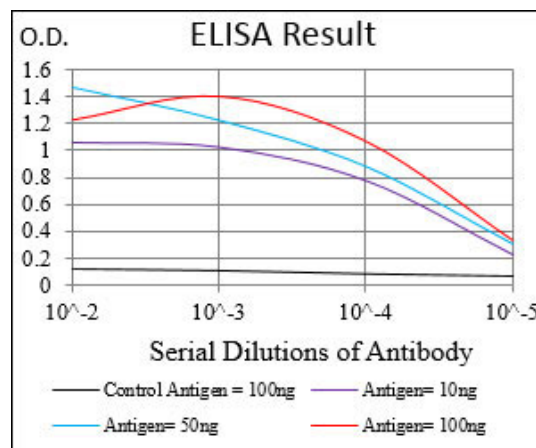
Tissue Location

Testis. Is selectively expressed in the spermatids of seminiferous tubules.

SMCP 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 Cytometry](#)
- [Cell Culture](#)



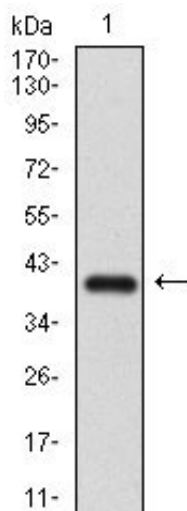


Figure 1: Western blot analysis using SMCP mAb against human SMCP (AA: 1-116) recombinant protein. (Expected MW is 38.3 kDa)

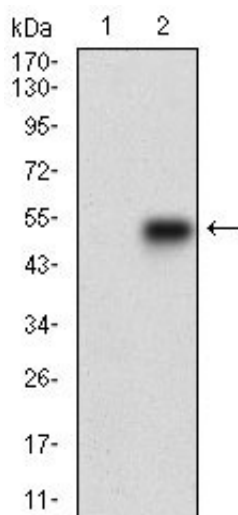


Figure 2: Western blot analysis using SMCP mAb against HEK293 (1) and SMCP (AA: 1-116)-hIgGFc transfected HEK293 (2) cell lysate.

SMCP Antibody - 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. ;

SMCP Antibody - References

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