

MOSPD3 (D-21): sc-102026

BACKGROUND

MOSPD3 (Motile sperm domain-containing protein 3), also known as CDS3, is a 235 amino acid multi-pass membrane protein that contains one MSP (major sperm protein) domain. The MSP domain, a critical component of sperm motility, has a seven-stranded beta sandwich and an immunoglobulin-like fold. MSP domains polymerize into helical, non-polar fragments that form a cytoskeleton made from intermeshed filaments. The intermeshed structure then assembles into large macromolecular complexes that play an important role in sperm movement. MOSPD3 is thought to be involved in development of the right ventricle, suggesting that the MSP domain may participate in cardiac development, as well as spermiogenesis. Three isoforms of MOSPD3 are expressed due to alternative splicing events.

REFERENCES

1. Bullock, T.L., et al. 1996. 2.5 Å resolution crystal structure of the motile major sperm protein (MSP) of *Ascaris suum*. *J. Mol. Biol.* 263: 284-296.
2. Glöckner, G., et al. 1998. Large-scale sequencing of two regions in human chromosome 7q22: analysis of 650 kb of genomic sequence around the Epo and CUTL1 loci reveals 17 genes. *Genome Res.* 8: 1060-1073.
3. Nishimura, Y., et al. 1999. Molecular cloning and characterization of mammalian homologues of vesicle-associated membrane protein-associated (VAMP-associated) proteins. *Biochem. Biophys. Res. Commun.* 254: 21-26.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609125. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Pall, G.S., et al. 2004. A novel transmembrane MSP-containing protein that plays a role in right ventricle development. *Genomics* 84: 1051-1059.
6. Wang, Y., et al. 2006. Tyrosine phosphorylated Par3 regulates epithelial tight junction assembly promoted by EGFR signaling. *EMBO J.* 25: 5058-5070.

CHROMOSOMAL LOCATION

Genetic locus: MOSPD3 (human) mapping to 7q22.1; *Mospd3* (mouse) mapping to 5 G2.

SOURCE

MOSPD3 (D-21) is a purified rabbit polyclonal antibody raised against MOSPD3 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

MOSPD3 (D-21) is recommended for detection of MOSPD3 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MOSPD3 siRNA (h): sc-89840, MOSPD3 siRNA (m): sc-149514, MOSPD3 shRNA Plasmid (h): sc-89840-SH, MOSPD3 shRNA Plasmid (m): sc-149514-SH, MOSPD3 shRNA (h) Lentiviral Particles: sc-89840-V and MOSPD3 shRNA (m) Lentiviral Particles: sc-149514-V.

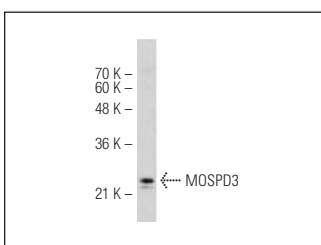
Molecular Weight of MOSPD3: 26 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



MOSPD3 (D-21): sc-102026. Western blot analysis of MOSPD3 expression in Jurkat whole cell lysate.

RESEARCH USE

For research use only, not for use in diagnostic procedures.