SANTA CRUZ BIOTECHNOLOGY, INC.

MOSPD3 (C-6): sc-514923

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 β sandwich and an immuoglobulin-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 A 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.

CHROMOSOMAL LOCATION

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

SOURCE

MOSPD3 (C-6) is a mouse monoclonal antibody raised against amino acids 99-160 mapping within an internal region of MOSPD3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MOSPD3 (C-6) is available conjugated to agarose (sc-514923 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514923 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514923 PE), fluorescein (sc-514923 FITC), Alexa Fluor® 488 (sc-514923 AF488), Alexa Fluor® 546 (sc-514923 AF546), Alexa Fluor® 594 (sc-514923 AF594) or Alexa Fluor® 647 (sc-514923 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514923 AF680) or Alexa Fluor® 790 (sc-514923 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MOSPD3 (C-6) is recommended for detection of MOSPD3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) 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.

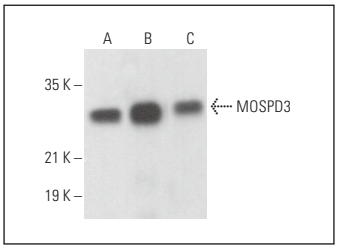
Molecular Weight of MOSPD3: 26 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, F9 cell lysate: sc-2245 or HL-60 whole cell lysate: sc-2209.

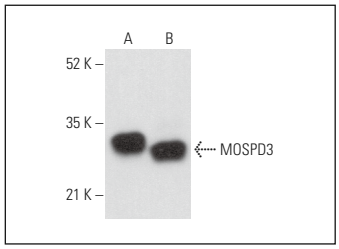
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MOSPD3 (C-6): sc-514923. Western blot analysis of MOSPD3 expression in Jurkat (**A**), HL-60 (**B**) and PC-12 (**C**) whole cell lysates.



MOSPD3 (C-6): sc-514923. Western blot analysis of MOSPD3 expression in 3T3-L1 (**A**) and F9 (**B**) whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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