SANTA CRUZ BIOTECHNOLOGY, INC.

SPATA9 (F-6): sc-515442

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SPATA9 (spermatogenesis associated 9), also known as NYD-SP16, is a 254 amino acid single-pass membrane protein that is highly expressed in testis and pancreas with low expression in heart, lung, and brain. A component of the sperm acrosome, SPATA9 may participate in sperm capacitation and acrosome reaction, and is therefore necessary for fertilization. SPATA9 is also suggested to be involved in testicular development/spermatogenesis and may be an important factor in male infertility. No expression of SPATA9 was found in patients affected by Sertoli-cell-only syndrome, also known as Del Castillo syndrome or germ cell aplasia, which is characterized by male sterility without sexual abnormality. SPATA9 is encoded by a gene located on human chromosome 5, which consists of about 181 million base pairs, encodes around 1,000 genes and represents about 6% of human genomic DNA.

REFERENCES

1. Dixon, M.J., et al. 1991. The gene for Treacher Collins syndrome maps to the long arm of chromosome 5. Am. J. Hum. Genet. 49: 17-22.
2. Zaneveld, L.J., et al. 1991. Human sperm capacitation and the acrosome reaction. Hum. Reprod. 6: 1265-1274.
3. Baldi, E., et al. 1996. Human sperm activation during capacitation and acrosome reaction: role of calcium, protein phosphorylation and lipid remodelling pathways. Front. Biosci. 1: d189-d205.
4. Dufault, V.M., et al. 2003. Identification and characterization of RAD9B, a paralog of the RAD9 checkpoint gene. Genomics 82: 644-651.
5. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 608039. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Lu, Y., et al. 2006. Human testicular protein NYD-SP16 is involved in sperm capacitation and the acrosome reaction. Fertil. Steril. 86: 1228-1234.

CHROMOSOMAL LOCATION

Genetic locus: SPATA9 (human) mapping to 5q15.

SOURCE

SPATA9 (F-6) is a mouse monoclonal antibody raised against amino acids 75-254 mapping at the C-terminus of SPATA9 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.

SPATA9 (F-6) is available conjugated to agarose (sc-515442 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515442 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515442 PE), fluorescein (sc-515442 FITC), Alexa Fluor® 488 (sc-515442 AF488), Alexa Fluor® 546 (sc-515442 AF546), Alexa Fluor® 594 (sc-515442 AF594) or Alexa Fluor® 647 (sc-515442 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515442 AF680) or Alexa Fluor® 790 (sc-515442 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SPATA9 (F-6) is recommended for detection of SPATA9 of 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 SPATA9 siRNA (h): sc-91922, SPATA9 shRNA Plasmid (h): sc-91922-SH and SPATA9 shRNA (h) Lentiviral Particles: sc-91922-V.

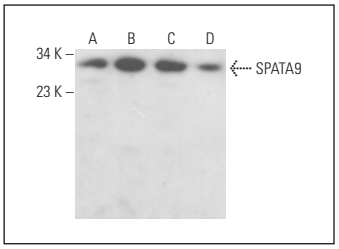
Molecular Weight of SPATA9: 29 kDa.

Positive Controls: rat testis extract: sc-2400, mouse testis extract: sc-2405 or NIH/3T3 whole cell lysate: sc-2210.

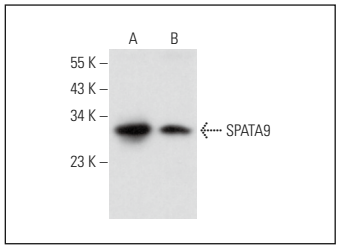
RECOMMENDED SUPPORT REAGENTS

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



SPATA9 (F-6): sc-515442. Western blot analysis of SPATA9 expression in F9 (**A**), NIH/3T3 (**B**), 3T3-L1 (**C**) and T24 (**D**) whole cell lysates.



SPATA9 (F-6): sc-515442. Western blot analysis of SPATA9 expression in rat testis (**A**) and mouse testis (**B**) tissue extracts.

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.