SANTA CRUZ BIOTECHNOLOGY, INC.

SPATA16 (G-2): sc-374112

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SPATA16 (spermatogenesis associated 16), also known as NYD-SP12, is a 569 amino acid protein that assists in the development of the sperm acrosome and is suggested to participate in spermatogenesis and sperm-egg fusion. A member of the SPATA16 family, SPATA16 localizes to Golgi apparatus and is primarily expressed in testis, with lower levels found in kidney and pancreas. SPATA16 is encoded by a gene that maps to human chromosome 3q26.31 and mouse chromosome 3 A3. Defects in the SPATA16 gene lead to the development of globozoospermia (also termed round-headed spermatozoa), a rare form of teratozoospermia that is characterized by malformation of sperm acrosome and infertility.

REFERENCES

1. Kullander, S. and Rausing, A. 1975. On round-headed human spermatozoa. Int. J. Fertil. 20: 33-40.
2. Battaglia, D.E., et al. 1997. Failure of oocyte activation after intracytoplasmic sperm injection using round-headed sperm. Fertil. Steril. 68: 118-122.
3. Xu, M., et al. 2003. Identification and characterization of a novel human testis-specific Golgi protein, NYD-SP12. Mol. Hum. Reprod. 9: 9-17.
4. Machev, N., et al. 2005. Chromosome abnormalities in sperm from infertile men with normal somatic karyotypes: teratozoospermia. Cytogenet. Genome Res. 111: 352-357.
5. Lu, L., et al. 2006. Gene functional research using polyethylenimine-mediated *in vivo* gene transfection into mouse spermatogenic cells. Asian J. Androl. 8: 53-59.

CHROMOSOMAL LOCATION

Genetic locus: SPATA16 (human) mapping to 3q26.31; Spata16 (mouse) mapping to 3 A3.

SOURCE

SPATA16 (G-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 549-569 at the C-terminus of SPATA16 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.

SPATA16 (G-2) is available conjugated to agarose (sc-374112 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374112 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374112 PE), fluorescein (sc-374112 FITC), Alexa Fluor® 488 (sc-374112 AF488), Alexa Fluor® 546 (sc-374112 AF546), Alexa Fluor® 594 (sc-374112 AF594) or Alexa Fluor® 647 (sc-374112 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374112 AF680) or Alexa Fluor® 790 (sc-374112 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374112 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

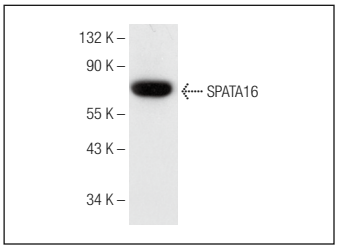
SPATA16 (G-2) is recommended for detection of SPATA16 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), 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 SPATA16 siRNA (h): sc-77980, SPATA16 siRNA (m): sc-153713, SPATA16 shRNA Plasmid (h): sc-77980-SH, SPATA16 shRNA Plasmid (m): sc-153713-SH, SPATA16 shRNA (h) Lentiviral Particles: sc-77980-V and SPATA16 shRNA (m) Lentiviral Particles: sc-153713-V.

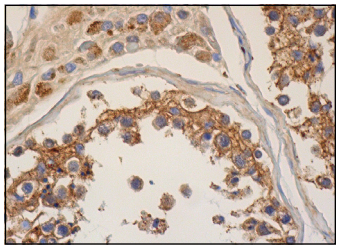
Molecular Weight of SPATA16: 65 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, F9 cell lysate: sc-2245 or rat testis extract: sc-2400.

DATA



SPATA16 (G-2): sc-374112. Western blot analysis of SPATA16 expression in F9 whole cell lysate.



SPATA16 (G-2): sc-374112. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

SELECT PRODUCT CITATIONS

1. Dai, S., et al. 2023. Population-based genetic analysis in infertile men reveals novel mutations of ADAD family members in patients with impaired spermatogenesis. Hum. Mol. Genet. 32: 1814-1825.

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.