SANTA CRUZ BIOTECHNOLOGY, INC.

SPATA16 (C-12): sc-103237

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.
6. Dam, A.H., et al. 2007. Homozygous mutation in SPATA16 is associated with male infertility in human globozoospermia. Am. J. Hum. Genet. 81: 813-820.
7. Zhang, Q., et al. 2007. Rapid evolution, genetic variations, and functional association of the human spermatogenesis-related gene NYD-SP12. J. Mol. Evol. 65: 154-161.

CHROMOSOMAL LOCATION

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

SOURCE

SPATA16 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SPATA16 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103237 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

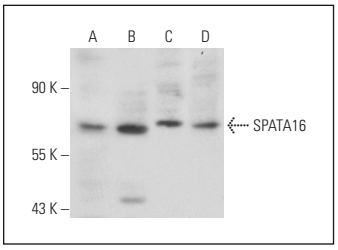
SPATA16 (C-12) is recommended for detection of SPATA16 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other SPATA family members.

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.

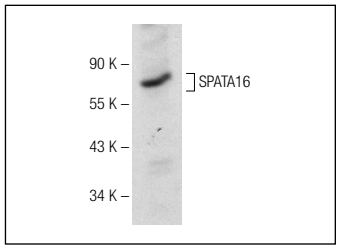
Molecular Weight of SPATA16: 65 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or rat testis extract: sc-2400.

DATA



SPATA16 (C-12): sc-103237. Western blot analysis of SPATA16 expression in NTERA-2 cl.D1 (**A**), HeLa (**B**) and NIH/3T3 (**C**) whole cell lysates and rat testis tissue extract (**D**).



SPATA16 (C-12): sc-103237. Western blot analysis of SPATA16 expression in F9 whole cell lysate.

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.

MONOS Satisfaction Guaranteed

Try **SPATA16 (G-2): sc-374112**, our highly recommended monoclonal alternative to SPATA16 (C-12).