

# SPATA16 (G-2): sc-374112

## 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<sub>2a</sub> 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.

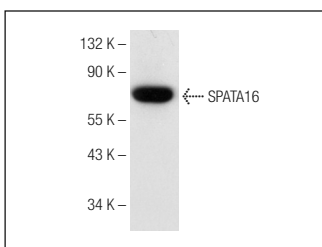
Molecular Weight of SPATA16: 65 kDa.

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

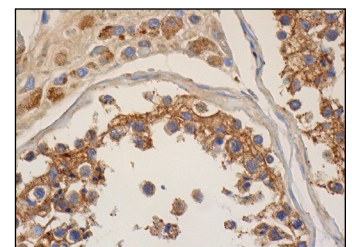
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## 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.

## 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.

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