SANTA CRUZ BIOTECHNOLOGY, INC.

SPAG17 (Q-14): sc-165526

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Mammalian sperm flagellum contain two cytoskeletal structures associated with the the axoneme: the outer dense fibers and the fibrous sheath. The outer dense fibers surround the axoneme in the midpiece and principal piece, whereas the fibrous sheath surrounds outer dense fibers of the tail of the principal piece. SPAG17 (sperm associated antigen 17), also known as PF6, is a 2,223 amino acid cytoplamic protein that colocalizes with SPAG6 to microtubles. Highly expressed in testis and in organs that contain cilia-bearing cells including brain, oviduct, lung, and uterus, SPAG17 may be important for the structural integrity of the central apparatus of the sperm axoneme. SPAG17 contains two LRR (leucine-rich) repeats and may also participate in flagellar motility and male fertility. SPAG17 is encoded by a gene mapping to human chromosome 1p12.

REFERENCES

1. Zhang, M.L., et al. 1992. Isolation and sequencing of the cDNA encoding the 75-kD human sperm protein related to infertility. Chin. Med. J. 105: 998-1003.
2. Neilson, L.I., et al. 1999. cDNA cloning and characterization of a human sperm antigen (SPAG6) with homology to the product of the *Chlamydomonas* PF16 locus. Genomics 60: 272-280.
3. Shao, X., et al. 2001. Testicular protein SPAG5 has similarity to mitotic spindle protein deepest and binds outer dense fiber protein Odf1. Mol. Reprod. Dev. 59: 410-416.
4. Sapiro, R., et al. 2002. Male infertility, impaired sperm motility, and hydrocephalus in mice deficient in sperm-associated antigen 6. Mol. Cell. Biol. 22: 6298-6305.
5. Kanazawa, R., et al. 2003. Isolation and characterization of a human sperm antigen gene h-Sp-1. Int. J. Androl. 26: 226-235.
6. Xing, X.W., et al. 2004. Identification of a novel gene SRG4 expressed at specific stages of mouse spermatogenesis. Acta Biochim. Biophys. Sin. 36: 351-359.
7. Zhang, Z., et al. 2007. A heterozygous mutation disrupting the SPAG16 gene results in biochemical instability of central apparatus components of the human sperm axoneme. Biol. Reprod. 77: 864-871.
8. Kim, J.J., et al. 2010. Identification of 15 loci influencing height in a Korean population. J. Hum. Genet. 55: 27-31.
9. Salilew-Wondim, D., et al. 2010. Bovine pre-transfer endometrium and embryo transcriptome fingerprints as predictors of pregnancy success after embryo transfer. Physiol. Genomics 42: 201-218.

CHROMOSOMAL LOCATION

Genetic locus: SPAG17 (human) mapping to 1p12; Spag17 (mouse) mapping to 3 F2.2.

SOURCE

SPAG17 (Q-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SPAG17 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-165526 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SPAG17 (Q-14) is recommended for detection of SPAG17 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 SPAG family members.

SPAG17 (Q-14) is also recommended for detection of SPAG17 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SPAG17 siRNA (h): sc-78955, SPAG17 siRNA (m): sc-153704, SPAG17 shRNA Plasmid (h): sc-78955-SH, SPAG17 shRNA Plasmid (m): sc-153704-SH, SPAG17 shRNA (h) Lentiviral Particles: sc-78955-V and SPAG17 shRNA (m) Lentiviral Particles: sc-153704-V.

Molecular Weight of SPAG17: 252 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.