

SPAG6 (H-4): sc-518235



The Power to Question

BACKGROUND

SPAG6 (sperm-associated antigen 6), also known as PF16 or Repro-SA-1, is a cytoplasmic protein that contains eight armadillo repeats and belongs to the armadillo repeat family. Proteins with armadillo repeats typically participate in protein-protein interactions, suggesting that SPAG6 associates with other proteins and may function as a structural or regulatory protein. Sharing 64% amino acid identity, SPAG6 is the mammalian homolog of the *Chlamydomonas reinhardtii* protein pf16, a component of the central apparatus in flagella. Predominantly expressed in testis, SPAG6 is a central apparatus protein that plays an important role in the sperm tail and is essential for flagellar motility and male fertility. SPAG6 interacts with SPAG16 and, together, these proteins may cooperate in the regulation of sperm motility. Four isoforms exist for SPAG6 due to alternative splicing events.

REFERENCES

1. 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.
2. Sapiro, R., et al. 2000. Sperm antigen 6 is the murine homologue of the *Chlamydomonas reinhardtii* central apparatus protein encoded by the PF16 locus. *Biol. Reprod.* 62: 511-518.
3. 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.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605730. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Zhang, Z., et al. 2005. Dissecting the axoneme interactome: the mammalian orthologue of *Chlamydomonas* PF6 interacts with sperm-associated antigen 6, the mammalian orthologue of *Chlamydomonas* PF16. *Mol. Cell. Proteomics* 4: 914-923.

CHROMOSOMAL LOCATION

Genetic locus: SPAG6 (human) mapping to 10p12.2.

SOURCE

SPAG6 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 356-374 of SPAG6 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SPAG6 (H-4) is available conjugated to agarose (sc-518235 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518235 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518235 PE), fluorescein (sc-518235 FITC), Alexa Fluor® 488 (sc-518235 AF488), Alexa Fluor® 546 (sc-518235 AF546), Alexa Fluor® 594 (sc-518235 AF594) or Alexa Fluor® 647 (sc-518235 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518235 AF680) or Alexa Fluor® 790 (sc-518235 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

SPAG6 (H-4) is recommended for detection of SPAG6 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).

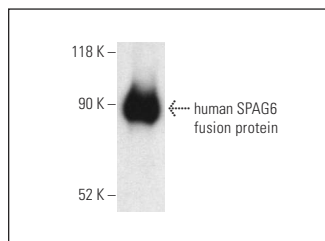
Suitable for use as control antibody for SPAG6 siRNA (h): sc-90404, SPAG6 shRNA Plasmid (h): sc-90404-SH and SPAG6 shRNA (h) Lentiviral Particles: sc-90404-V.

Molecular Weight of SPAG6: 57 kDa.

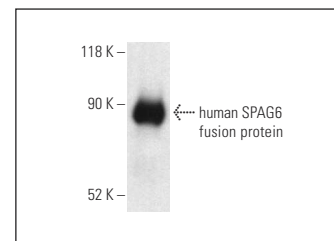
RECOMMENDED SUPPORT REAGENTS

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



SPAG6 (H-4): sc-518235. Western blot analysis of human recombinant SPAG6 fusion protein. Detection reagent used: m-IgG₁ BP-HRP: sc-525408.



SPAG6 (H-4): sc-518235. Western blot analysis of human recombinant SPAG6 fusion protein. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

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.

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