

SPAG5 (H-300): sc-98605



The Power to Question

BACKGROUND

SPAG5 (sperm-associated antigen 5), also known as MAP126, hMAP126, DEEPEST or Astrin, is a 1,193 amino acid protein that is expressed at high levels in testis and at lower levels in liver, placenta, pancreas, colon and thymus. Localized specifically to spindle poles during prophase and throughout the spindle during metaphase and anaphase, SPAG5 is essential for proper spindle formation and is thought to be involved in the dynamic and functional regulation of mitotic spindles. Additionally, SPAG5 plays a role in sister chromatid cohesion and subsequent chromatid separation and, via its association with chromatids, is an important regulator of chromosome integrity. SPAG5 has a long stalk and a globular head domain through which it forms a homodimer that is characterized by aster-like structures. Upon DNA damage, SPAG5 may be phosphorylated by ATR or Atm.

REFERENCES

1. Chang, M.S., Huang, C.J., Chen, M.L., Chen, S.T., Fan, C.C., Chu, J.M., Lin, W.C. and Yang, Y.C. 2001. Cloning and characterization of hMAP126, a new member of mitotic spindle-associated proteins. *Biochem. Biophys. Res. Commun.* 287: 116-121.
2. Shao, X., Xue, J. and van der Hoorn, F.A. 2001. Testicular protein SPAG5 has similarity to mitotic spindle protein DEEPEST and binds outer dense fiber protein Odf1. *Mol. Reprod. Dev.* 59: 410-416.
3. Mack, G.J. and Compton, D.A. 2001. Analysis of mitotic microtubule-associated proteins using mass spectrometry identifies Astrin, a spindle-associated protein. *Proc. Natl. Acad. Sci. USA* 98: 14434-14439.
4. Gruber, J., Harborth, J., Schnabel, J., Weber, K. and Hatzfeld, M. 2002. The mitotic spindle-associated protein Astrin is essential for progression through mitosis. *J. Cell Sci.* 115: 4053-4059.
5. Yang, Y.C., Hsu, Y.T., Wu, C.C., Chen, H.T. and Chang, M.S. 2006. Silencing of Astrin induces the p53-dependent apoptosis by suppression of HPV18 E6 expression and sensitizes cells to paclitaxel treatment in HeLa cells. *Biochem. Biophys. Res. Commun.* 343: 428-434.

CHROMOSOMAL LOCATION

Genetic locus: SPAG5 (human) mapping to 17q11.2.

SOURCE

SPAG5 (H-300) is a rabbit polyclonal antibody raised against amino acids 7-300 mapping near the N-terminus of SPAG5 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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

SPAG5 (H-300) is recommended for detection of SPAG5 of 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), 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 SPAG5 siRNA (h): sc-76545, SPAG5 shRNA Plasmid (h): sc-76545-SH and SPAG5 shRNA (h) Lentiviral Particles: sc-76545-V.

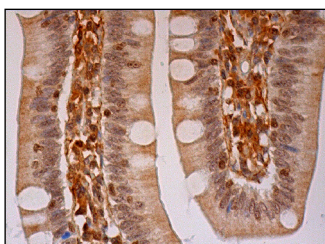
Molecular Weight of SPAG5: 140 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



SPAG5 (H-300): sc-98605. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic and nuclear staining of glandular cells.

RESEARCH USE

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



Try **SPAG5 (LX-8): sc-100885**, our highly recommended monoclonal alternative to SPAG5 (H-300).