

SP17 (C-3): sc-374507

BACKGROUND

SP17 (sperm protein 17), also known as SPA17 (sperm autoantigenic protein 17), SP17-1 or CT22 (cancer/testis antigen 22), is a sperm surface peripheral membrane protein. It is predominantly expressed in testis and contains two heparan binding motifs and a C-terminal calmodulin (CaM)-binding domain. SP17 exists as a homodimer and localizes to the head and tail of spermatozoa. Residing in the fibrous sheath of the tail, SP17 interacts, via its N-terminus, with AKAP 3 and may play an important signaling role in this PKA-independent AKAP complex. Localizing to the cytoplasm of the head of spermatozoa, SP17 can bind to the zona pellucida of the oocyte with high affinity, suggesting a role in fertilization. In addition, SP17 has been identified as a cancer/testis antigen and is expressed in ovarian cancer and multiple myeloma. This suggests that SP17 could be suitable as a target in tumor immunotherapy.

REFERENCES

1. Frayne, J., et al. 2002. A re-evaluation of sperm protein (SP17) indicates a regulatory role in an A-kinase anchoring protein complex, rather than a unique role in sperm-zona pellucida binding. *Reproduction* 124: 767-774.
2. Takeoka, Y., et al. 2002. Developmental considerations of sperm protein 17 gene expression in rheumatoid arthritis synovialocytes. *Dev. Immunol.* 9: 97-102.
3. Grizzi, F., et al. 2003. Immunolocalization of sperm protein 17 in human testis and ejaculated spermatozoa. *J. Histochem. Cytochem.* 51: 1245-1248.
4. Wang, Z., et al. 2004. SP17 gene expression in myeloma cells is regulated by promoter methylation. *Br. J. Cancer* 91: 1597-1603.
5. Lea, I.A., et al. 2004. Association of sperm protein 17 with A-kinase anchoring protein 3 in flagella. *Reprod. Biol. Endocrinol.* 2: 57.
6. Grizzi, F., et al. 2004. Sperm protein 17 is expressed in human somatic ciliated epithelia. *J. Histochem. Cytochem.* 52: 549-554.

CHROMOSOMAL LOCATION

Genetic locus: SPA17 (human) mapping to 11q24.2.

SOURCE

SP17 (C-3) is a mouse monoclonal antibody raised against amino acids 41-151 mapping at the C-terminus of SP17 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SP17 (C-3) is available conjugated to agarose (sc-374507 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374507 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374507 PE), fluorescein (sc-374507 FITC), Alexa Fluor® 488 (sc-374507 AF488), Alexa Fluor® 546 (sc-374507 AF546), Alexa Fluor® 594 (sc-374507 AF594) or Alexa Fluor® 647 (sc-374507 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374507 AF680) or Alexa Fluor® 790 (sc-374507 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

SP17 (C-3) is recommended for detection of SP17 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 SP17 siRNA (h): sc-63052, SP17 shRNA Plasmid (h): sc-63052-SH and SP17 shRNA (h) Lentiviral Particles: sc-63052-V.

Molecular Weight of SP17 triplet: 22-25 kDa.

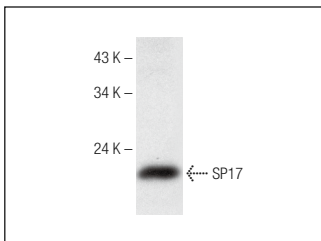
Molecular Weight of SP17 dimer: 54 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, ES-2 cell lysate: sc-24674 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

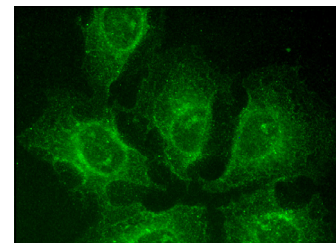
RECOMMENDED SUPPORT REAGENTS

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



SP17 (C-3): sc-374507. Western blot analysis of SP17 expression in NTERA-2 cl.D1 whole cell lysate.



SP17 (C-3): sc-374507. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

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.