

SP17 (21): sc-136454

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. Takeoka, Y., et al. 2002. Developmental considerations of sperm protein 17 gene expression in rheumatoid arthritis synoviocytes. *Dev. Immunol.* 9: 97-102.
2. Frayne, J. and Hall, L. 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.
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. 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; Spa17 (mouse) mapping to 9 A4.

SOURCE

SP17 (21) is a mouse monoclonal antibody raised against amino acids 34-138 of SP17 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.

SP17 (21) is available conjugated to agarose (sc-136454 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136454 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136454 PE), fluorescein (sc-136454 FITC), Alexa Fluor[®] 488 (sc-136454 AF488), Alexa Fluor[®] 546 (sc-136454 AF546), Alexa Fluor[®] 594 (sc-136454 AF594) or Alexa Fluor[®] 647 (sc-136454 AF647), 200 µg/ml, for WB (RGB), IF and IHC(P); and to either Alexa Fluor[®] 680 (sc-136454 AF680) or Alexa Fluor[®] 790 (sc-136454 AF790), 200 µg/ml, for Near-Infrared (NIR) WB and IF.

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APPLICATIONS

SP17 (21) is recommended for detection of SP17 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]; non cross-reactive with canine SP17.

Suitable for use as control antibody for SP17 siRNA (h): sc-63052, SP17 siRNA (m): sc-63053, SP17 shRNA Plasmid (h): sc-63052-SH, SP17 shRNA Plasmid (m): sc-63053-SH, SP17 shRNA (h) Lentiviral Particles: sc-63052-V and SP17 shRNA (m) Lentiviral Particles: sc-63053-V.

Molecular Weight of SP17 triplet: 22-25 kDa.

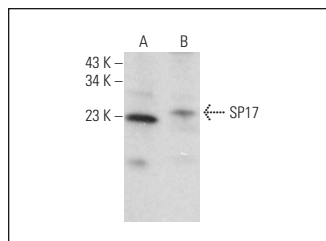
Molecular Weight of SP17 dimer: 54 kDa.

Positive Controls: mouse testis extract: sc-2405, human testis extract: sc-363781 or ES-2 cell lysate: sc-24674.

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).

DATA



SP17 (21): sc-136454. Western blot analysis of SP17 expression in mouse testis (A) and human testis (B) tissue extracts.

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.