

SP17 (M-110): sc-135088

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. 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.
2. Takeoka, Y., et al. 2002. Developmental considerations of sperm protein 17 gene expression in rheumatoid arthritis synoviocytes. *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.
7. Bumm, K., et al. 2005. Sperm protein 17 expression defines 2 subsets of primary esthesioneuroblastoma. *Hum. Pathol.* 36: 1289-1293.
8. Dadabayev, A.R., et al. 2005. Cancer immunotherapy targeting SP17: when should the laboratory findings be translated to the clinics? *Am. J. Hematol.* 80: 6-11.
9. Grizzi, F., et al. 2006. Sperm protein 17 is expressed in human nervous system tumours. *BMC Cancer* 6: 23.

CHROMOSOMAL LOCATION

Genetic locus: Spa17 (mouse) mapping to 9 A4.

SOURCE

SP17 (M-110) is a rabbit polyclonal antibody raised against amino acids 40-149 mapping at the C-terminus of SP17 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SP17 (M-110) is recommended for detection of SP17 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SP17 siRNA (m): sc-63053, SP17 shRNA Plasmid (m): sc-63053-SH 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.

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.

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.



Try **SP17 (21): sc-136454** or **SP17 (A-12): sc-365325**, our highly recommended monoclonal alternatives to SP17 (M-110).