

# SPEM1 (N-14): sc-136901

## BACKGROUND

SPEM1 (spermatid maturation 1) is a 309 amino acid transmembrane and cytoplasmic protein that is required for proper cytoplasm removal during spermatogenesis. SPEM1 interacts with both Ran BP-17 and PLIC-1. Since PLIC-1 functions through binding and directing poly-ubiquitinated proteins to the proteasome for degradation, interactions between PLIC-1 and SPEM1 suggest a role in the regulation of protein ubiquitination during spermiogenesis. The SPEM1 gene maps to human chromosome 17p13.1. Comprising over 2.5% of the human genome, chromosome 17 consists of about 81 million bases, encodes over 1,200 genes and has the highest gene density in the genome. Chromosome 17 is also enriched in segmental duplications, ranking third in density among the autosomes.

## REFERENCES

1. Zody, M.C., et al. 2006. DNA sequence of human chromosome 17 and analysis of rearrangement in the human lineage. *Nature* 440: 1045-1049.
2. Suela, J., et al. 2007. Neurofibromatosis 1, and Not TP53, seems to be the main target of chromosome 17 deletions in *de novo* acute myeloid leukemia. *J. Clin. Oncol.* 25: 1151-1152.
3. Zheng, H., et al. 2007. Lack of Spem1 causes aberrant cytoplasm removal, sperm deformation, and male infertility. *Proc. Natl. Acad. Sci. USA* 104: 6852-6857.
4. Moore, K., et al. 2010. Altered epididymal sperm maturation and cytoplasmic droplet migration in subfertile male Alox15 mice. *Cell Tissue Res.* 340: 569-581.
5. Yan, W., et al. 2010. Zmynd15 encodes a histone deacetylase-dependent transcriptional repressor essential for spermiogenesis and male fertility. *J. Biol. Chem.* 285: 31418-31426.
6. Bao, J., et al. 2010. UBQLN1 interacts with SPEM1 and participates in spermiogenesis. *Mol. Cell. Endocrinol.* 327: 89-97.
7. Bao, J., et al. 2011. RANBP17 is localized to the XY body of spermatocytes and interacts with SPEM1 on the manchette of elongating spermatids. *Mol. Cell. Endocrinol.* 333: 134-142.

## CHROMOSOMAL LOCATION

Genetic locus: SPEM1 (human) mapping to 17p13.1; Spem1 (mouse) mapping to 11 B3.

## SOURCE

SPEM1 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SPEM1 of human origin.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## PRODUCT

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

Blocking peptide available for competition studies, sc-136901 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SPEM1 (N-14) is recommended for detection of SPEM1 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SPEM1 (N-14) is also recommended for detection of SPEM1 in additional species, including bovine.

Suitable for use as control antibody for SPEM1 siRNA (h): sc-93929, SPEM1 siRNA (m): sc-153748, SPEM1 shRNA Plasmid (h): sc-93929-SH, SPEM1 shRNA Plasmid (m): sc-153748-SH, SPEM1 shRNA (h) Lentiviral Particles: sc-93929-V and SPEM1 shRNA (m) Lentiviral Particles: sc-153748-V.

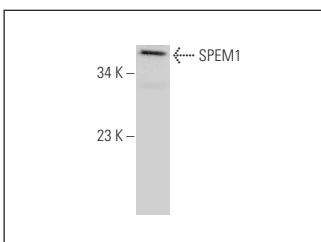
Molecular Weight of SPEM1: 35 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



SPEM1 (N-14): sc-136901. Western blot analysis of SPEM1 expression in Jurkat whole cell lysate.

## RESEARCH USE

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