

# SPATA20 (L-14): sc-109041

## BACKGROUND

SPATA20 (spermatogenesis associated 20), also known as SP411 or Tisp78, is a 786 amino acid protein that may be involved in fertility regulation. SPATA20 is expressed in testes in an age dependent manner and localizes to round and elongated spermatids. SPATA20 contains a conserved thioredoxin-like domain near the N-terminus region and exists as four isoforms produced by alternative splicing events. SPATA20 is encoded by a gene located on human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

## REFERENCES

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3. Laboissiere, M.C., et al. 1995. The essential function of protein-disulfide isomerase is to unscramble non-native disulfide bonds. *J. Biol. Chem.* 270: 28006-28009.
4. Shi, H.J., et al. 2004. Cloning and characterization of rat spermatid protein SSP411: a thioredoxin-like protein. *J. Androl.* 25: 479-493.
5. Nusbaum, R., et al. 2006-2007. Susceptibility to breast cancer: hereditary syndromes and low penetrance genes. *Breast Dis.* 27: 21-50.
6. Tai, Y.C., et al. 2007. Breast cancer risk among male BRCA1 and BRCA2 mutation carriers. *J. Natl. Cancer Inst.* 99: 1811-1814.
7. Yan, J., et al. 2007. Blimp-1 regulates cell growth through repression of p53 transcription. *Proc. Natl. Acad. Sci. USA* 104: 1841-1846.

## CHROMOSOMAL LOCATION

Genetic locus: SPATA20 (human) mapping to 17q21.33; Spata20 (mouse) mapping to 11 D.

## SOURCE

SPATA20 (L-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SPATA20 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.

Blocking peptide available for competition studies, sc-109041 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SPATA20 (L-14) is recommended for detection of SPATA20 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SPATA20 (L-14) is also recommended for detection of SPATA20 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SPATA20 siRNA (h): sc-93946, SPATA20 siRNA (m): sc-153718, SPATA20 shRNA Plasmid (h): sc-93946-SH, SPATA20 shRNA Plasmid (m): sc-153718-SH, SPATA20 shRNA (h) Lentiviral Particles: sc-93946-V and SPATA20 shRNA (m) Lentiviral Particles: sc-153718-V.

Molecular Weight of SPATA20: 88 kDa.

## 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) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.