

SPATA19 (D-14): sc-109038

BACKGROUND

SPATA19 (spermatogenesis associated 19), also known as spergen1 (spermatogenic cell-specific gene 1 protein), CT132 or SPAS1, is a 167 amino acid mitochondrial outer membrane protein suggested to function in spermiogenesis. Expressed specifically in testis, SPATA19 is encoded by a gene that maps to human chromosome 11, which comprises approximately 4% of human genomic DNA and is considered a gene and disease association dense chromosome. The chromosome 11 encoded *Atm* gene is important for regulation of cell cycle arrest and apoptosis following double strand DNA breaks. *Atm* mutation leads to the disorder known as ataxia-telangiectasia. The blood disorders Sickle cell anemia and thalassemia are caused by HBB gene mutations, while Wilms' tumors, WAGR syndrome and Denys-Drash syndrome are associated with mutations of the WT1 gene. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are also associated with defects in chromosome 11-encoded genes.

REFERENCES

1. Fabiani, J.E., et al. 2000. Hereditary angioedema. Long-term follow-up of 88 patients. Experience of the Argentine Allergy and Immunology Institute. *Allergol. Immunopathol.* 28: 267-271.
2. Jira, P.E., et al. 2003. Smith-Lemli-Opitz syndrome and the DHCR7 gene. *Ann. Hum. Genet.* 67: 269-280.
3. Miyamoto, T., et al. 2003. Isolation and expression analysis of the human testis-specific gene, SPERGEN-1, a spermatogenic cell-specific gene-1. *J. Assist. Reprod. Genet.* 20: 101-104.
4. Matsuoka, Y., et al. 2004. Cloning and characterization of a mouse spergen-1 localized in sperm mitochondria. *Int. J. Androl.* 27: 152-160.
5. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inherit. Metab. Dis.* 30: 654-663.

CHROMOSOMAL LOCATION

Genetic locus: SPATA19 (human) mapping to 11q25; Spata19 (mouse) mapping to 9 A4.

SOURCE

SPATA19 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SPATA19 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-109038 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SPATA19 (D-14) is recommended for detection of SPATA19 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); non cross-reactive with other SPATA family members.

SPATA19 (D-14) is also recommended for detection of SPATA19 in additional species, including bovine.

Suitable for use as control antibody for SPATA19 siRNA (h): sc-96552, SPATA19 siRNA (m): sc-153716, SPATA19 shRNA Plasmid (h): sc-96552-SH, SPATA19 shRNA Plasmid (m): sc-153716-SH, SPATA19 shRNA (h) Lentiviral Particles: sc-96552-V and SPATA19 shRNA (m) Lentiviral Particles: sc-153716-V.

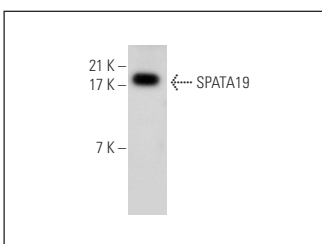
Molecular Weight of SPATA19: 19 kDa.

Positive Controls: mouse testis extract: sc-2405 or rat testis extract: sc-2400.

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



SPATA19 (D-14): sc-109038. Western blot analysis of SPATA19 expression in mouse testis tissue extract.

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.