

# SPUVE (K-12): sc-162273

## BACKGROUND

SPUVE, also known as PRSS23 (serine protease 23), SIG13 or ZSIG13, is a 383 amino acid secreted protein belonging to the trypsin family of serine proteases. SPUVE contains the standard catalytic serine typical for the peptidase S1 family of proteases. The SPUVE gene is highly conserved in vertebrates and may be an important ovarian protease. SPUVE is encoded by a gene located on 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

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- Loussouarn, G., et al. 2006. KCNQ1 K<sup>+</sup> channel-mediated cardiac channelopathies. *Methods Mol. Biol.* 337: 167-183.
- Miyakoshi, K., et al. 2006. The identification of novel ovarian proteases through the use of genomic and bioinformatic methodologies. *Biol. Reprod.* 75: 823-835.
- Taylor, T.D., et al. 2006. Human chromosome 11 DNA sequence and analysis including novel gene identification. *Nature* 440: 497-500.
- Zehelein, J., et al. 2006. Skipping of exon 1 in the KCNQ1 gene causes Jervell and Lange-Nielsen syndrome. *J. Biol. Chem.* 281: 35397-35403.
- Ataga, K.I., et al. 2007.  $\beta$ -thalassaemia and sickle cell anaemia as paradigms of hypercoagulability. *Br. J. Haematol.* 139: 3-13.
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## CHROMOSOMAL LOCATION

Genetic locus: PRSS23 (human) mapping to 11q14.2; Prss23 (mouse) mapping to 7 E1.

## SOURCE

SPUVE (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SPUVE of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-162273 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SPUVE (K-12) is recommended for detection of SPUVE of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

SPUVE (K-12) is also recommended for detection of SPUVE in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SPUVE siRNA (h): sc-96411, SPUVE siRNA (m): sc-153810, SPUVE shRNA Plasmid (h): sc-96411-SH, SPUVE shRNA Plasmid (m): sc-153810-SH, SPUVE shRNA (h) Lentiviral Particles: sc-96411-V and SPUVE shRNA (m) Lentiviral Particles: sc-153810-V.

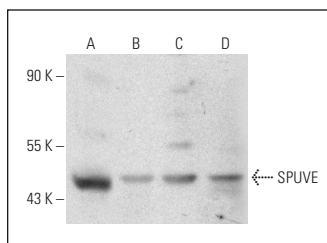
Molecular Weight of SPUVE: 43 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MDA-MB-231 cell lysate: sc-2232 or A549 cell lysate: sc-2413.

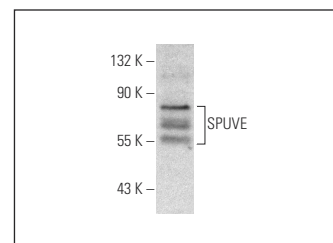
## RECOMMENDED SECONDARY REAGENTS

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



SPUVE (K-12): sc-162273. Western blot analysis of SPUVE expression in LADMAC (A), A549 (B), MDA-MB-231 (C) and T84 (D) whole cell lysates.



SPUVE (K-12): sc-162273. Western blot analysis of SPUVE expression in HeLa whole cell lysate.

## 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.