SANTA CRUZ BIOTECHNOLOGY, INC.

Testisin (A-11): sc-390317

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Testisin, also known as ESP-1, plays an important role in spermatogenesis and fertilization. Originally identified as a testis-specific serine protease, this protein may also play important regulatory roles in other biological systems linked to capillary morphogenesis and angiogenesis. Immunostaining for testisin in round and elongating spermatids demonstrates specific staining in the cytoplasm and on the plasma membrane. The testisin gene localizes to the short arm of human chromosome 16 (16p13.3). Alternative pre-mRNA splicing gives rise to two different isoforms. The testisin gene is expressed in normal testis cells and not in testis tumor cell lines, but only in ovarian carcinoma and not normal ovary cells. Therefore, loss of expression in testicular cells or induction of expression in ovarian cells may play a role in the development, progression, and invasive capacity of testicular/ovarian tumors.

REFERENCES

1. Hooper, J.D., et al. 1999. Testisin, a new human serine proteinase expressed by premeiotic testicular germ cells and lost in testicular germ cell tumors. Cancer Res. 59: 3199-3205.
2. Hooper, J.D., et al. 2000. Localization, expression and genomic structure of the gene encoding the human serine protease testisin. Biochim. Biophys. Acta 1492: 63-71.
3. Shigemasa, K., et al. 2000. Overexpression of testisin, a serine protease expressed by testicular germ cells, in epithelial ovarian tumor cells. J. Soc. Gynecol. Investig. 7: 358-362.
4. Scarman, A.L., et al. 2001. Organization and chromosomal localization of the murine Testisin gene encoding a serine protease temporally expressed during spermatogenesis. Eur. J. Biochem. 268: 1250-1258.
5. Nakamura, Y., et al. 2003. Cloning, expression analysis, and tissue distribution of esp-1/Testisin, a membrane-type serine protease from the rat. J. Med. Invest. 50: 78-86.
6. Aimes, R.T., et al. 2003. Endothelial cell serine proteases expressed during vascular morphogenesis and angiogenesis. Thromb. Haemost. 89: 561-572.

CHROMOSOMAL LOCATION

Genetic locus: Prss21 (mouse) mapping to 17 A3.3.

SOURCE

Testisin (A-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 111-149 within an internal region of Testisin of mouse origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390317 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Testisin (A-11) is recommended for detection of precursor and mature Testisin of mouse and rat origin by Western Blotting (starting dilution 1:100, 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 Testisin siRNA (m): sc-72137, Testisin shRNA Plasmid (m): sc-72137-SH and Testisin shRNA (m) Lentiviral Particles: sc-72137-V.

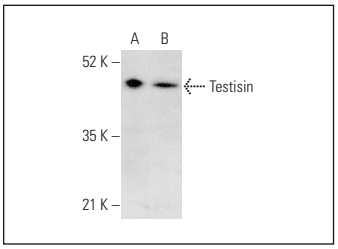
Molecular Weight of Testisin: 42 kDa.

Positive Controls: F9 cell lysate: sc-2245 or M1 whole cell lysate: sc-364782.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Testisin (A-11): sc-390317. Western blot analysis of Testisin expression in F9 (**A**) and M1 (**B**) whole cell lysates.

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 for detailed protocols and support products.