SANTA CRUZ BIOTECHNOLOGY, INC.

Semenogelin-1/2 (H-300): sc-33819

BACKGROUND

Semenogelin, secreted high molecular weight seminal vesicle (HMV-SC) proteins, are the predominant protein found in semen. Semenogelin-1 and Semenogelin-2 are digested by PSA (prostate-specific antigen) in semen which leads to liquefaction and release of motile spermatozoa. Semenogelin-1 is a natural substrate of PSA. The Semenogelin precursor is processed to produce α-inhibin 31 and α-inhibin 92 active peptides. Semenogelin is involved in the formation of the gel matrix that encases ejaculated spermatozoa. Fragments of semenogelin and/or fragments of the related proteins contribute to sperm movement activation. Semenogelin can form a complex with Eppin, an epididymal protease inhibitor. This complex of Eppin and Semenogelin can provide antimicrobial activity for spermatozoa. It can also provide for the preparation and survival of spermatozoa for fertility in the female reproductive tract. The genes encoding the two Semenogelin proteins are found in a cluster on chromosome 20.

REFERENCES

1. Dorus, S., Evans, P.D., Wyckoff, G.J., Choi, S.S. and Lahn, B.T. 2004. Rate of molecular evolution of the seminal protein gene SEMG2 correlates with levels of female promiscuity. Nat. Genet. 36: 1326-1329.
2. Furutani, Y., Kato, A., Kawai, R., Fibriani, A., Kojima, S. and Hirose, S. 2004. Androgen-dependent expression, gene structure, and molecular evolution of guinea pig caltrin II, a WAP-motif protein. Biol. Reprod. 71: 1583-1590.
3. Lwaleed, B.A., Greenfield, R.S., Hicks, J., Birch, B.R. and Cooper, A.J. 2005. Quantitation of seminal factor IX and factor IXa in fertile, nonfertile, and vasectomy subjects: a step closer toward identifying a functional clotting system in human semen. J. Androl. 26: 146-152.
4. Volkel, T., Heidtmann, H.H., Muller, R. and Kontermann, R.E. 2005. Engineering of human coagulation factor x variants activated by prostate-specific antigen. Mol. Biotechnol. 29: 19-30.

CHROMOSOMAL LOCATION

Genetic locus: SEMG1/SEMG2 (human) mapping to 20q13.12.

SOURCE

Semenogelin-1/2 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Semenogelin-1 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.

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.

APPLICATIONS

Semenogelin-1/2 (H-300) is recommended for detection of Semenogelin-1 precursor, α-inhibin 31, α-inhibin 92 and Semenogelin-2 of 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).

Molecular Weight of Semenogelin 1: 52 kDa.

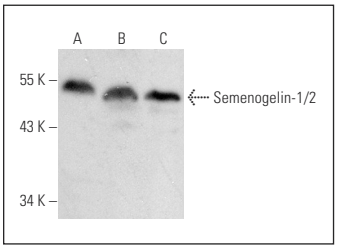
Molecular Weight of Semenogelin 2: 71/76 kDa.

Positive Controls: Y79 cell lysate: sc-2240, A549 cell lysate: sc-2413 or NCI-H460 whole cell lysate: sc-364235.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Semenogelin-1/2 (H-300): sc-33819. Western blot analysis of Semenogelin-1/2 expression in Y79 (**A**), A549 (**B**) and NCI-H460 (**C**) whole cell lysates.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.