

Semenogelin-2 (G-12): sc-34721

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.
5. Wang, Z., Widgren, E.E., Sivashanmugam, P., O'Rand, M.G. and Richardson, R.T. 2005. Association of Eppin with semenogelin on human spermatozoa. *Biol. Reprod.* 72: 1064-1070.
6. Jonsson, M., Linse, S., Frohm, B., Lundwall, A. and Malm, J. 2005. Semenogelins I and II bind zinc and regulate the activity of prostate-specific antigen. *Biochem. J.* 387: 447-453.

CHROMOSOMAL LOCATION

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

SOURCE

Semenogelin-2 (G-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Semenogelin-2 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-34721 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Semenogelin-2 (G-12) is recommended for detection of Semenogelin-2 of 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), immunohistochemistry (including paraffin-embedded sections) (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 Semenogelin-2 siRNA (h): sc-44417, Semenogelin-2 shRNA Plasmid (h): sc-44417-SH and Semenogelin-2 shRNA (h) Lentiviral Particles: sc-44417-V.

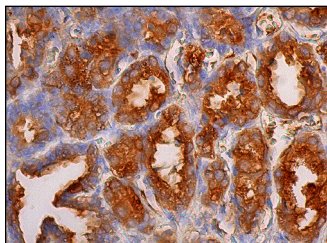
Molecular Weight of Semenogelin-2: 71/76 kDa.

Positive Controls: DU 145 cell lysate: sc-2268 or LNCaP cell lysate: sc-2231.

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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Semenogelin-2 (G-12): sc-34721. Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing cytoplasmic staining of glandular cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.