

Semenogelin-1 (G-1): sc-365939

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., et al. 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., et al. 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., et al. 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., et al. 2005. Engineering of human coagulation Factor X variants activated by prostate-specific antigen. *Mol. Biotechnol.* 29: 19-30.

CHROMOSOMAL LOCATION

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

SOURCE

Semenogelin-1 (G-1) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Semenogelin-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Semenogelin-1 (G-1) is available conjugated to agarose (sc-365939 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365939 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365939 PE), fluorescein (sc-365939 FITC), Alexa Fluor[®] 488 (sc-365939 AF488), Alexa Fluor[®] 546 (sc-365939 AF546), Alexa Fluor[®] 594 (sc-365939 AF594) or Alexa Fluor[®] 647 (sc-365939 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365939 AF680) or Alexa Fluor[®] 790 (sc-365939 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

Semenogelin-1 (G-1) is recommended for detection of Semenogelin-1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for Semenogelin-1 siRNA (h): sc-44416, Semenogelin-1 shRNA Plasmid (h): sc-44416-SH and Semenogelin-1 shRNA (h) Lentiviral Particles: sc-44416-V.

Molecular Weight of Semenogelin-1: 52 kDa.

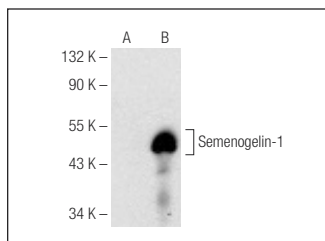
Molecular Weight of Semenogelin-2: 71/76 kDa.

Positive Controls: human Semenogelin-1 transfected 293T whole cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



Semenogelin-1 (G-1): sc-365939. Western blot analysis of Semenogelin-1 expression in non-transfected (A) and human Semenogelin-1 transfected (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. de Beijer, R.P., et al. 2018. Identification and detection of protein markers to differentiate between forensically relevant body fluids. *Forensic Sci. Int.* 290: 196-206.

STORAGE

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

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