SANTA CRUZ BIOTECHNOLOGY, INC.

BSPH1 (L-12): sc-241214

BACKGROUND

A process termed capacitation is required for sperm to become competent of fertilization. Capacitation involves a number of molecular and morphological steps, which are promoted by a family of phospholipid-binding proteins found in bovine seminal plasma (BSP), and thus, have been termed BSP proteins. BSP proteins bind the sperm membrane during ejaculation to trigger capacitation and stimulate cholesterol and phospholipid efflux from the sperm membrane. BSP homologs and are believed to be conserved in mammals, characterized by two tandemly repeated fibronectin type-II domains. BSPH1 (binder of sperm protein homolog 1), also known as bovine seminal plasma protein homolog 1, bovine seminal plasma protein-like 1 or Gm767, is a 133 amino acid protein that belongs to the seminal plasma protein family. BSPH1 is a secreted protein, located only in epididymis. The gene encoding BSPH1 maps to human chromosome 19q13.32.

REFERENCES

1. Moreau, R., et al. 1998. Type II domains of BSP-A1/-A2 proteins: binding properties, lipid efflux, and sperm capacitation potential. Biochem. Biophys. Res. Commun. 246: 148-154.
2. Manjunath, P., et al. 2002. Role of seminal plasma phospholipid-binding proteins in sperm membrane lipid modification that occurs during capacitation. J. Reprod. Immunol. 53: 109-119.
3. Fan, J., et al. 2006. Bovine seminal plasma proteins and their relatives: A new expanding superfamily in mammals. Gene 375: 63-74.
4. Ekhlasi-Hundrieser, M., et al. 2007. Sperm-binding fibronectin type II-module proteins are genetically linked and functionally related. Gene 392: 253-265.
5. Lefebvre, J., et al. 2007. Genomic structure and tissue-specific expression of human and mouse genes encoding homologues of the major bovine seminal plasma proteins. Mol. Hum. Reprod. 13: 45-53.

VCHROMOSOMAL LOCATION

Genetic locus: BSPH1 (human) mapping to 19q13.33.

SOURCE

BSPH1 (L-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BSPH1 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.

Blocking peptide available for competition studies, sc-241214 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

BSPH1 (L-12) is recommended for detection of BSPH1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of BSPH1: 16 kDa.

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.

RESEARCH USE

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

PROTOCOLS

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