



BPY2 (G-19): sc-84232

BACKGROUND

Mammalian spermatogenesis is a complex developmental process. Mutations at multiple loci and in structurally and functionally disparate genes in the genome affect gametogenesis. The analysis of mutations has provided insight into biochemical pathways required for completion of this process. The basic protein on Y chromosome 2 gene (BPY2, also designated VCY2) is located in a frequently deleted azoospermia factor c region. Three copies (paralogs) of the BPY2 gene (BPY2A, BPY2B, BPY2C) reside in the AZFc region. BPY2 protein expression is localized to the nuclei of spermatogonia, spermatocytes and round spermatids, but is absent from elongated spermatids. Impaired expression of BPY2 in infertile men suggests its involvement in male germ cell development. BPY2 interacts with MAP-1S, which shares homology with microtubule-associated proteins (MAPs), suggesting a role for BPY2 within the cytoskeletal network.

REFERENCES

1. Wong, E.Y., Tse, J.Y., Yao, K.M., Tam, P.C. and Yeung, W.S. 2002. VCY2 protein interacts with the HECT domain of ubiquitin-protein ligase E3A. *Biochem. Biophys. Res. Commun.* 296: 1104-1111.
2. Tse, J.Y., Wong, E.Y., Cheung, A.N., O, W.S., Tam, P.C. and Yeung, W.S. 2003. Specific expression of VCY2 in human male germ cells and its involvement in the pathogenesis of male infertility. *Biol. Reprod.* 69: 746-751.
3. Wong, E.Y., Tse, J.Y., Yao, K.M., Lui, V.C., Tam, P.C. and Yeung, W.S. 2004. Identification and characterization of human VCY2-interacting protein: VCY2IP-1, a microtubule-associated protein-like protein. *Biol. Reprod.* 70: 775-784.
4. Choi, J., Koh, E., Suzuki, H., Maeda, Y., Yoshida, A. and Namiki, M. 2007. Alu sequence variants of the BPY2 gene in proven fertile and infertile men with Sertoli cell-only phenotype. *Int. J. Urol.* 14: 431-435.
5. Sadeghi-Nejad, H. and Farrokhi, F. 2007. Genetics of azoospermia: current knowledge, clinical implications, and future directions. Part II: Y chromosome microdeletions. *Urol J.* 4: 192-206.
6. Nuti, F. and Krausz, C. 2008. Gene polymorphisms/mutations relevant to abnormal spermatogenesis. *Reprod. Biomed. Online* 16: 504-513.

SOURCE

BPY2 (G-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of BPY2B of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84232 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

BPY2 (G-19) is recommended for detection of BPY2, BPY2B and BPY2C 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 BPY2: 14 kDa.

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) 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.

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.