

BSPRY (S-18): sc-162583

BACKGROUND

BSPRY (B-box and SPRY domain containing) is a 402 amino acid protein that localizes to both the membrane and the cytoplasm and contains one B box-type zinc finger and one B30.2/SPRY domain. Existing as two alternatively spliced isoforms, BSPRY interacts with TRPV5 and TRPV6, and is thought to regulate the transport of calcium across the epithelium, probably by inhibiting the activity of TRPV proteins. The gene encoding BSPRY maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

1. Schenker, T. and Trueb, B. 2000. BSPRY, a novel protein of the Ro-Ret family. *Biochim. Biophys. Acta* 1493: 255-258.
2. Gislis, S.M., Stagljari, I., Traebert, M., Bacic, D., Biber, J. and Murer, H. 2001. Interaction of the type IIa Na/P_i co-transporter with PDZ proteins. *J. Biol. Chem.* 276: 9206-9213.
3. Birkenfeld, J., Kartmann, B., Anliker, B., Ono, K., Schlötcke, B., Betz, H. and Roth, D. 2003. Characterization of zetin 1/rBSPRY, a novel binding partner of 14-3-3 proteins. *Biochem. Biophys. Res. Commun.* 302: 526-533.
4. van Abel, M., Hoenderop, J.G. and Bindels, R.J. 2005. The epithelial calcium channels TRPV5 and TRPV6: regulation and implications for disease. *Naunyn Schmiedeberg's Arch. Pharmacol.* 371: 295-306.
5. Nijenhuis, T., Hoenderop, J.G. and Bindels, R.J. 2005. TRPV5 and TRPV6 in Ca²⁺ (re)absorption: regulating Ca²⁺ entry at the gate. *Pflugers Arch.* 451: 181-192.
6. van de Graaf, S.F., van der Kemp, A.W., van den Berg, D., van Oorschot, M., Hoenderop, J.G. and Bindels, R.J. 2006. Identification of BSPRY as a novel auxiliary protein inhibiting TRPV5 activity. *J. Am. Soc. Nephrol.* 17: 26-30.
7. Gkika, D., Hsu, Y.J., van der Kemp, A.W., Christakos, S., Bindels, R.J. and Hoenderop, J.G. 2006. Critical role of the epithelial Ca²⁺ channel TRPV5 in active Ca²⁺ reabsorption as revealed by TRPV5/calbindin-D28K knockout mice. *J. Am. Soc. Nephrol.* 17: 3020-3027.
8. Schoeber, J.P., Hoenderop, J.G. and Bindels, R.J. 2007. Concerted action of associated proteins in the regulation of TRPV5 and TRPV6. *Biochem. Soc. Trans.* 35: 115-119.

CHROMOSOMAL LOCATION

Genetic locus: BSPRY (human) mapping to 9q32; Bspry (mouse) mapping to 4 B3.

SOURCE

BSPRY (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BSPRY of human origin.

RESEARCH USE

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

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-162583 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BSPRY (S-18) is recommended for detection of BSPRY of mouse, rat and 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).

BSPRY (S-18) is also recommended for detection of BSPRY in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BSPRY siRNA (h): sc-92522, BSPRY siRNA (m): sc-141765, BSPRY shRNA Plasmid (h): sc-92522-SH, BSPRY shRNA Plasmid (m): sc-141765-SH, BSPRY shRNA (h) Lentiviral Particles: sc-92522-V and BSPRY shRNA (m) Lentiviral Particles: sc-141765-V.

Molecular Weight of BSPRY: 57 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.

STORAGE

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

PROTOCOLS

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