SANTA CRUZ BIOTECHNOLOGY, INC.

BSPRY (C-12): sc-377320

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. Gisler, S.M., et al. 2001. Interaction of the type IIa Na/Pi cotransporter with PDZ proteins. J. Biol. Chem. 276: 9206-9213.
3. Birkenfeld, J., et al. 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., et al. 2005. The epithelial calcium channels TRPV5 and TRPV6: regulation and implications for disease. Naunyn Schmiedebergs Arch. Pharmacol. 371: 295-306.
5. Nijenhuis, T., et al. 2005. TRPV5 and TRPV6 in Ca^{2+} (re)absorption: regulating Ca^{2+} entry at the gate. Pflugers Arch. 451: 181-192.

CHROMOSOMAL LOCATION

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

SOURCE

BSPRY (C-12) is a mouse monoclonal antibody raised against amino acids 103-402 mapping at the C-terminus of BSPRY of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BSPRY (C-12) is available conjugated to agarose (sc-377320 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377320 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377320 PE), fluorescein (sc-377320 FITC), Alexa Fluor® 488 (sc-377320 AF488), Alexa Fluor® 546 (sc-377320 AF546), Alexa Fluor® 594 (sc-377320 AF594) or Alexa Fluor® 647 (sc-377320 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377320 AF680) or Alexa Fluor® 790 (sc-377320 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

BSPRY (C-12) is recommended for detection of BSPRY of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 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.

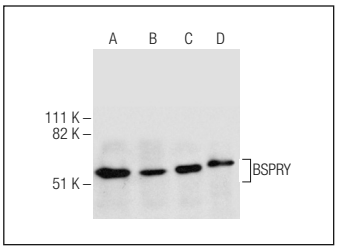
Molecular Weight of BSPRY: 57 kDa.

Positive Controls: human kidney extract: sc-363764, mouse kidney extract: sc-2255 or K-562 whole cell lysate: sc-2203.

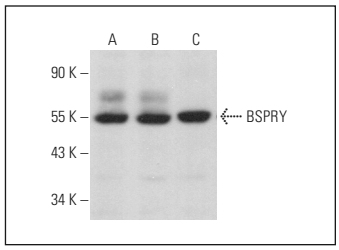
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



BSPRY (C-12): sc-377320. Western blot analysis of BSPRY expression in MIA PaCa-2 (**A**) and K-562 (**B**) whole cell lysates and human kidney (**C**) and mouse kidney (**D**) tissue extracts.



BSPRY (C-12): sc-377320. Western blot analysis of BSPRY expression in K-562 (**A**), HEL 92.1.7 (**B**) and HEK293 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Loureiro, C.A., et al. 2020. A SYK/SHC1 pathway regulates the amount of CFTR in the plasma membrane. Cell. Mol. Life Sci. 77: 4997-5015.

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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