

BVES (H-4): sc-374082

BACKGROUND

Blood vessel epicardial substance (BVES), also designated Popeye protein 1, is a transmembrane protein that plays a role in cell-cell interactions and adhesion, specifically at tight junctions. BVES is composed of an extracellular amino-terminus, three transmembrane domains and a cytoplasmic carboxyl-terminus. It is expressed in the developing coronary vascular system, specifically in the proepicardium, migrating epithelial epicardium, delaminated vasculogenic mesenchyme and vascular smooth muscle cells, where it functions to direct development in heart, epithelial and muscle cells during embryogenesis. BVES accumulates at points of cell-cell contact, such as filopodia and cell borders, and promotes adhesion prior to the arrival of E-cadherin. It also regulates epithelial integrity during cell movement and growth.

REFERENCES

1. Reese, D.E., et al. 1999. BVES: a novel gene expressed during coronary blood vessel development. *Dev. Biol.* 209: 159-171.
2. Wada, A.M., et al. 2001. BVES: prototype of a new class of cell adhesion molecules expressed during coronary artery development. *Development* 128: 2085-2093.
3. Osler, M.E., et al. 2004. BVES expression during avian embryogenesis. *Dev. Dyn.* 229: 658-667.
4. Vasavada, T.K., et al. 2004. Developmental expression of Pop1 BVES. *J. Histochem. Cytochem.* 52: 371-377.
5. von Kodolitsch, Y., et al. 2004. Coronary artery anomalies. Part I: recent insights from molecular embryology. *Z. Kardiol.* 93: 929-937.
6. Brand, T. 2005. The Popeye domain-containing gene family. *Cell Biochem. Biophys.* 43: 95-103.
7. Osler, M.E., et al. 2005. BVES modulates epithelial integrity through an interaction at the tight junction. *J. Cell Sci.* 118: 4667-4678.
8. Osler, M.E., et al. 2006. BVES, a member of the Popeye domain-containing gene family. *Dev. Dyn.* 235: 586-593.
9. Ripley, A.N., et al. 2006. Xbves is a regulator of epithelial movement during early *Xenopus laevis* development. *Proc. Natl. Acad. Sci. USA* 103: 614-619.

CHROMOSOMAL LOCATION

Genetic locus: BVES (human) mapping to 6q21; Bves (mouse) mapping to 10 B2.

SOURCE

BVES (H-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of BVES of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

BVES (H-4) is recommended for detection of BVES 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 BVES siRNA (h): sc-60295, BVES siRNA (m): sc-60296, BVES siRNA (r): sc-270037, BVES shRNA Plasmid (h): sc-60295-SH, BVES shRNA Plasmid (m): sc-60296-SH, BVES shRNA Plasmid (r): sc-270037-SH, BVES shRNA (h) Lentiviral Particles: sc-60295-V, BVES shRNA (m) Lentiviral Particles: sc-60296-V and BVES shRNA (r) Lentiviral Particles: sc-270037-V.

Molecular Weight of BVES: 41 kDa.

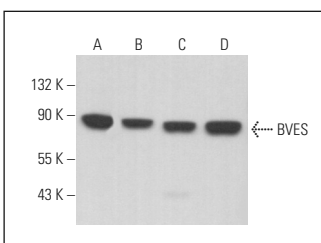
Molecular Weight of BVES differential glycosylation: 58-80 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176, A-673 cell lysate: sc-2414 or PC-3 cell lysate: sc-2220.

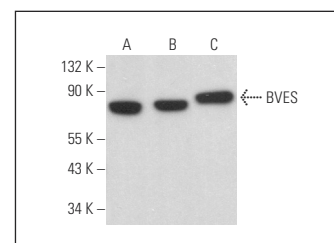
RECOMMENDED SUPPORT REAGENTS

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



BVES (H-4): sc-374082. Western blot analysis of BVES expression in PC-3 (A), RD (B), Sol8 (C) and A-10 (D) whole cell lysates.



BVES (H-4): sc-374082. Western blot analysis of BVES expression in U-251-MG (A), A-673 (B) and PC-3 (C) whole cell lysates.

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 for detailed protocols and support products.