

# BVES (E-3): sc-374081

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

BVES (E-3) 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 IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BVES (E-3) is available conjugated to agarose (sc-374081 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374081 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374081 PE), fluorescein (sc-374081 FITC), Alexa Fluor® 488 (sc-374081 AF488), Alexa Fluor® 546 (sc-374081 AF546), Alexa Fluor® 594 (sc-374081 AF594) or Alexa Fluor® 647 (sc-374081 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374081 AF680) or Alexa Fluor® 790 (sc-374081 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

BVES (E-3) 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.

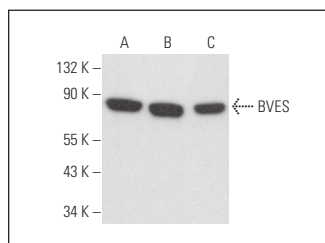
Molecular Weight of BVES due to differential glycosylation: 58-80 kDa.

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

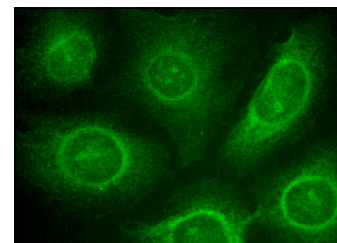
## RECOMMENDED SUPPORT REAGENTS

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 (E-3): sc-374081. Western blot analysis of BVES expression in PC-3 (A), U-251-MG (B) and A-673 (C) whole cell lysates.



BVES (E-3): sc-374081. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

## SELECT PRODUCT CITATIONS

- Gingold-Belfer, R., et al. 2021. The transition from gastric intestinal metaplasia to gastric cancer involves POPDC1 and POPDC3 downregulation. *Int. J. Mol. Sci.* 22: 5359.
- Tibbo, A.J., et al. 2022. Phosphodiesterase type 4 anchoring regulates cAMP signaling to Popeye domain-containing proteins. *J. Mol. Cell. Cardiol.* 165: 86-102.
- Han, P., et al. 2022. Cell adhesion molecule BVES functions as a suppressor of tumor cells extrusion in hepatocellular carcinoma metastasis. *Cell Commun. Signal.* 20: 149.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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