Data Sheet (Cat.No.TMPY-01000)

TargetMol

BVES Protein, Human, Recombinant (GST)

General Information

Synonyms:	CARICK;LGMD2X;POP1;blood vessel epicardial substance;POPDC1;HBVES
Protein Construction:	A DNA sequence encoding the human BVES (NP_671488.1) (Met1-Asn36) was fused with the GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q8NE79
Molecular Weight:	30.8 kDa (predicted); 32.2 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Blood vessel epicardial substance (BVES), or POPDC1, is a tight junction-associated transmembrane protein that modulates epithelial-to-mesenchymal transition (EMT) via junctional signaling pathways. BVES plays a protective role both in ulcerative and infectious colitis and identify BVES as a critical protector of colonic mucosal integrity. The Popeye domain containing1, also called Bves (Popdc1/Bves), is a transmembrane protein that functions in muscle regeneration, heart rate regulation, hypoxia tolerance, and ischemia preconditioning. The expression of

Popdc1/Bves is elevated in cardiomyocytes maintained in serum free defined medium. Popdc1/Bves plays a role in the preservation of cardiomyocyte viability under serum deficiency through the alteration of Rac1 activity and the regulation of Bnip3 expression by FoxO3 and NFκB transcription factors pointing to Popdc1/Bves as a potential target to enhance heart protection. Blood vessel epicardial substance (BVES) is a tight junction-associated protein that regulates epithelial-mesenchymal states and is underexpressed in epithelial malignancy. Loss of BVES promotes inflammatory tumourigenesis through dysregulation of Wnt signalling and the oncogene c-Myc. BVES promoter methylation status may serve as a CAC biomarker. Blood vessel epicardial substance (BVES/Popdc1) is a junctional-associated transmembrane protein that is underexpressed in a number of malignancies and regulates epithelial-to-mesenchymal transition. BVES is a key regulator of intestinal stem cell programs and mucosal homeostasis.

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