Data Sheet (Cat.No.TMPY-01456)

TargetMol

BAMBI Protein, Human, Recombinant (His)

General Information

Synonyms:	BMP and activin membrane-bound inhibitor;NMA
Protein Construction:	A DNA sequence encoding the human BAMBI extracellular domain (NP_036474.1) (Met 1-Ala 152) was expressed, fused with a C-terminal polyhistidine tag. Predicted N terminal: Val 21
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q13145
Molecular Weight:	16.1 kDa (predicted); 16-23 kDa (reducing condition, due to glycosylation)

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:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
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

BMP and activin membrane-bound inhibitor (BAMBI) is a transmembrane glycoprotein that is a pseudoreceptor of type 1 receptors. BAMBI structurally lacks intracellular serine/ threonine kinase domain but with an extracellular domain and a short cytoplasmic region that share sequence similarities with type 1 receptors, whose members have functions in signal transduction in various developing and pathological processes. BAMBI competes with the type 1 receptor, a receptor of the transforming growth factor-beta (TGF-beta), through functioning as negative

regulators of TGF-beta by limiting the signaling range of the TGF-beta family during early embryogenesis. The expression of BAMBI can be induced by accumulated beta-catenin and BMP. The expression level of BAMBI was found aberrantly elevated in most colorectal and hepatocellular carcinomas relative to the corresponding non-cancerous tissues. It suggestes that beta-catenin and TGF-beta interfere growth arrest by inducing the expression of BAMBI, and this may contribute to colorectal and hepatocellular tumorigenesis.

Reference

Sekiya T,et al.(2003) Identification of BMP and Activin Membrane-bound Inhibitor (BAMBI), an Inhibitor of Transforming Growth Factor- Signaling, as a Target of the -Catenin Pathway in Colorectal Tumor Cells. The Journal of Biological Chemistry. 279:6840-6.

Shi YG,et al.(2003) Mechanisms of TGF- Signaling from Cell Membrane to the Nucleus. Cell. 113(6): 685-700.

Wanninger J,et al.(2011) Adiponectin induces the transforming growth factor decoy receptor BAMBI in human hepatocytes. FEBS Lett. 585(9):1338-44.

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