Data Sheet (Cat.No.TMPY-00431)

TargetMol

BMP-4 Protein, Mouse, Recombinant (rFc)

General Information

Synonyms:	bone morphogenetic protein 4;Bmp-4;Bmp2b-1;Bmp2b;Bmp2b1
Protein Construction:	A DNA sequence encoding the mouse BMP4 (NP_031580.2) (Ser293-Arg408) was expressed with the Fc region of rabbit IgG at the N-terminus.. Predicted N terminal: Ser
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P21275
Molecular Weight:	40.6 kDa (predicted)

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:	> 92 % 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.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

BMP4 (bone morphogenetic protein-4)-directed differentiation of human embryonic stem cells (ESCd). Autophagy is a conserved catabolic process with complicated roles in tumor development. Bone morphogenetic protein 4 (BMP4), a member of the transforming growth factor (TGF-β) family of regulatory proteins, plays a crucial role in human malignancies. BMP4 treatment promoted HCC cells proliferation and induced autophagy. Mechanistic study revealed that the induction of autophagy by BMP4 was mediated through activating the JNK1/Bcl2 pathway.

And the JNK1 inhibitor and knockdown of JNK1 could attenuate autophagy induced by BMP4 and eliminated BMP4-promoted HCC cells growth. BMP4 promoted HCC proliferation by autophagy activation through JNK1/Bcl-2 signaling.

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