

BMP-7 Protein, Human, Recombinant (GST)

General Information

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| Synonyms: | Bone morphogenetic protein 7;OP1;BMP-7;BMP7;Osteogenic protein 1 (OP-1) |
| Protein Construction: | 293-431 aa |
| Species: | Human |
| Expression Host: | E. coli |
| Accession: | P18075 |
| Molecular Weight: | 42.7 kDa (predicted) |
| AA Sequence: | STGSKQRSQNRSKTPKNQEALRMANVAENSSSDQRQACKKHELYVSFRDLGWQDWIIAPEGYAAYYCEGE CAFPLNSYMNATNHAIVQTLVHFINPETVPKPCCAPTQLNAISVLYFDDSSNVILKKYRNMVVRACGCH |

QC Testing

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| Biological Activity: | Activity has not been tested. 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: | < 1.0 EU/μg of the protein as determined by the LAL method. |
| Formulation: | Tris-based buffer, 50% glycerol |

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:

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

Growth factor of the TGF-beta superfamily that plays important role in various biological processes, including embryogenesis, hematopoiesis, neurogenesis and skeletal morphogenesis. Initiates the canonical BMP signaling cascade by associating with type I receptor ACVR1 and type II receptor ACVR2A. Once all three components are bound together in a complex at the cell surface, ACVR2A phosphorylates and activates ACVR1. In turn, ACVR1 propagates signal by phosphorylating SMAD1/5/8 that travel to the nucleus and act as activators and repressors of transcription of target genes. For specific functions such as growth cone collapse in developing spinal neurons

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and chemotaxis of monocytes, uses also BMP2 as type II receptor. Can also signal through non-canonical pathways such as P38 MAP kinase signaling cascade that promotes brown adipocyte differentiation through activation of target genes, including members of the SOX family of transcription factors.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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