

BMP-3B/GDF10 Protein, Human (His)

Cat. No.:	HY-P7332
Synonyms:	rHuBMP-3B; BIP; BMP-3B; GDF-10
Species:	Human
Source:	E. coli
Accession:	P55107 (Q369-R478)
Gene ID:	2662
Molecular Weight:	Approximately 16 kDa

PROPERTIES

AA Sequence	<p> M Q W D E P R V C S R R Y L K V D F A D I G W N E W I I S P K S F D A Y Y C A G A C E F P M P K I V R P S N H A T I Q S I V R A V G I I P G I P E P C C V P D K M N S L G V L F L D E N R N V V L K V Y P N M S V D T C A C R </p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 µm filtered solution of PBS, 6% Trehalose, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	<p>Bone Morphogenetic Protein 3 (BMP-3) is a ligand protein with pleiotropic, belongs to TGFβ family. BMP-3 is a major component of osteogenin, which has osteogenic activity^[1]. BMP-3 is widely found in different animals, while the sequence in human is lowly similar to Rat (81.94%), and mouse (80.86%).</p> <p>BMP-3 particularly serves as a reliable biomarker for screening colorectal cancer (CRC) because BMP-3 is hypermethylated and its protein expression is significantly reduced in cancer cell lines^[2].</p> <p>BMP-3 also plays a suppressor role in carcinogenesis, suppresses colon tumorigenesis via ActRIIB/SMAD2-dependent and TAK1/JNK signaling pathways^[2].</p> <p>BMP-3 could exert two-way regulatory effects on activin signaling in distinct cell types. BMP-3 stimulates proliferation of human mesenchymal stem cells which could be blocked by TGF-β/activin receptor kinase inhibitors^[3].</p> <p>BMP/TGFβ signaling to involve in vascular and valvular homeostasis, which is a critical process of embryonic development^[4]</p>
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. And BMP/TGF β signaling can be terminated by inhibitory SMADs including SMAD6 and SMAD7, which are activated and induced by BMP signaling and switch off BMP signaling via multiple mechanisms^[5].

REFERENCES

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