



Recombinant human BMP-10

20150227BB



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Cat.-no.:	100-405
Size:	10 µg
Lot. No.:	According to product label

Scientific Background

Gene-ID (NCBI):	27302
Synonyms:	BMP-10, Bone morphogenetic protein 10

Bone morphogenetic proteins (BMPs) constitute a subfamily within the TGF- β superfamily of structurally related signaling proteins. Members of this superfamily are widely distributed throughout the body and are involved in diverse physiological processes during both pre- and postnatal life. BMP-10 plays a crucial role in the development of the embryonic heart by acting to stimulate and maintain cardiomyocyte proliferation. It can signal through various receptor complexes usually containing BMPR-1A, BMPR-1B, ALK1, ALK3, or ALK6. The interaction of BMP-10 with its specific receptors can induce signaling initiated by the phosphorylation of SMAD transcription factors, including SMAD1, SMAD5, or SMAD8, but can also induce SMAD independent processes. BMP-10 is structurally related to BMP-9, and both can inhibit endothelial cell proliferation and migration. Recombinant human BMP-10 is a 24.4 kDa homodimeric disulfide-linked protein consisting of two 108 amino acid subunits, which correspond to amino acid residues 317 to 424 of the full-length BMP-10 precursor.

Sequence

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NAKGNVCKRT PLYIDFKEIG WDSWIIAPPG YEAYECRGVC  
NYPLAEHLTP TKHAIIQALV HLNKNSQKASK ACCVPTKLEP  
ISILYLDKGV VTYKFKYEGM AVSECGCR
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Database References

Protein RefSeq:	NP_055297.1
Uniprot ID:	O95393
mRNA RefSeq:	NM_014482.1

Product Specifications

Expressed in	HEK293 cells
Purity	>95% by SDS-PAGE & HPLC analysis
Structural Information	homodimer
Endotoxin level	< 0.1 ng /µg of protein (<1EU/µg).
Formulation	lyophilized
Length (aa):	108
MW:	24.4 kDa

Biological Activity: Determined by its ability to induce alkaline phosphatase production by ATDC-5 cells. The expected ED50 for this effect is 4.0-6.0 ng/ml.



AVOID REPEATED FREEZE AND THAW CYCLES!