

Recombinant Human Bone Morphogenetic Protein 7

Cat. No. BMP7-12H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Bone Morphogenetic Protein 7 Gene encoding the human Bone Morphogenetic Protein 7 protein sequence (containing the signal peptide sequence, and the mature BMP7 sequence) was expressed in modified <i>human 293 cells</i> .
Species	Human
Source	HEK293
Description	Bone morphogenetic proteins (BMPs) are a group of approximately 15 structurally related proteins belonging to the TGF-beta protein family. One member of this family is bone morphogenetic protein 7 (BMP-7). BMP-7 is a 431 amino acid protein that exists as a homodimer, linked by a single disulfide bond. BMP-7 is expressed in a wide variety of tissues including bone marrow, spleen, thymus, heart, muscle, liver, kidney pancreas, prostate and lung, in embryonic tissues, as well as in the central nervous system (including spinal cord).
Amino Acid Sequence	STGSKQRSQNRSKTPKNQEALRMANVAENSSSDQRQACKKHELYVSFRDLGWQD WIIAP EGYAAYYCEGECAPFLNSYMNATNHAIVQTLVHFINPETVPKPCCAPTQLNAI SVLYFDDSS NVILKKYRNMVVRACGCH.
Molecular Mass	Bone Morphogenetic Protein 7 migrates as a broad band between 15 and 16 kDa on SDS-PAGE due to post-translation modifications, in particular glycosylation. This compares with unmodified BMP-7 that has a predicted molecular mass of 15.7 kDa.
pI	The unmodified BMP-7 has a predicted pI of 8.5.

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Glycosylation	Bone Morphogenetic Protein 7 contains N-linked and possibly O-linked oligosaccharides.
Purity	>95%, as determined by SDS-PAGE and visualized by Coomassie Brilliant Blue.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial.
Storage	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, with longer-term storage in aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.

GENE INFORMATION

Gene Name	BMP7 bone morphogenetic protein 7 [Homo sapiens]
Synonyms	BMP7; bone morphogenetic protein 7; OP-1; osteogenic protein 1; Eptotermin alfa; BMP-7
Gene ID	655
mRNA Refseq	NM_001719
Protein Refseq	NP_001710
UniProt ID	P18075
Chromosome	20q13

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Location**MIM**

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Pathway

Cytokine-cytokine receptor interaction; Hedgehog signaling pathway; TGF-beta signaling pathway

Function

cytokine activity; growth factor activity; parin binding; protein binding

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