SYMANSIS
CELL SIGNALING SCIENCE

Product Data Sheet

human cell expressed BMP-7 hex

Source	A DNA sequence encoding the human BMP-7 protein sequence (containing the signal peptide sequence, and the mature BMP-7 sequence) was expressed in modified human 293 cells.
Molecular Mass	Symansis BMP-7 hex 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.
Glycosylation	Symansis BMP-7 hex 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℃. Following reconstitution short-term storage at 4℃ is recommended, with longer-term sto rage inaliquots at -18 to -20℃. Repeated freeze thawing is not recommended.
Background Information	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). BMP-7 plays a major role in bone growth (osteogenesis) and regeneration by inducing collagen production in osteoblasts, the differentiation of stem cells and organogenesis during embryogenesis. BMP-7 is also involved in the chemotaxis of monocytes and has neuroprotective and neurogenesis properties. BMP-7 may be used in the treatment of wound healing, tissue repair and bone fractures, for neuroprotection and neurogenesis in the CNS and in nerve or spinal injuries. For a review of the role of BMP-7 please refer to Chen *et al.* (2004) Growth Factors **22(4)**:233-41.
Theoretical Sequence	STGSKQRSQNRSKTPKNQEALRMANVAENSSSDQRQACKKHELYVSFRDLGWQDWIIAP EGYAAYYCEGECAFPLNSYMNATNHAIVQTLVHFINPETVPKPCCAPTQLNAISVLYFDDSS NVILKKYRNMVVRACGCH

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