

**Recombinant Human Bone Morphogenetic Protein 7
(rhBMP-7)
Catalog Number: 108-07**

Description	BMPs (Bone Morphogenetic Proteins) belong to the TGF-beta of signaling proteins and were originally identified as protein regulators of cartilage and bone formation, BMP-7 being the most potent osteoconductive factor. They have also been shown to regulate the growth, differentiation, chemotaxis and apoptosis of various cell types, including mesenchymal cells, epithelial cells, hematopoietic cells and neuronal cells. Exogenous BMP-7 promotes enhanced production of collagen type-II, aggrecan and hyaluronan. It can counteract interleukin-1 on human articular chondrocytes and is thought to maintain normal chondrocyte homeostasis. BMP-7 is synthesized as large precursor molecule which are cleaved by proteolytic enzymes. The active form can be found as homodimers or heterodimers.
Synonyms	OP-1 (osteogenic protein 1)
AA Sequence	STGSKQRSQN RSKTPKNQEA LRMANVAENS SSDQRQACKK HELYVSFRDL GWQDWIIAPE GYAAYYCEGE CAFPLNSYMN ATNHAIVQTL VHFINPETVP KPCCAPQLN AISVLYFDDS SNVILKKYRN MVVRACGCH
Source	<i>Escherichia coli</i>
Molecular Weight	Approximately 15.6 kDa, a monomeric, non-glycosylated polypeptide chain containing 139 amino acids.
Purity	>95% by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active.
Physical Appearance	White lyophilized powder.
Formulation	Lyophilized from a 0.2µm filtered concentrated solution in 30% acetonitrile, 0.1% TFA.
Endotoxin	< 1EU/µg of growth factor as determined by LAL method.
Reconstitution	Reconstitute in 10mM HAc to a concentration of 0.1-1.0 mg/mL.
Storage	Store at -20°C after receiving. Upon reconstitution, store at 2-8°C for up to one week. For maximal stability, aliquot and store at -20°C. Avoid repeated freeze/ thaw cycles.
Usage	This product is for research use only. It is not approved for use in humans, animals, or <i>in vitro</i> diagnostic procedures.