Recombinant Human Bone Morphogenetic Protein 4
(rhBMP-4)
Catalog Number: 108-04

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. However, they have since been shown to be involved in embryogenesis and morphogenesis of various tissues and organs. BMPs 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. Reduction in BMP-4 expression is associated with a number of bone-related diseases, including Fibrodysplasia Ossificans Progressiva. BMP-4 is synthesized as large precursor molecule which are cleaved by proteolytic enzymes. The active form can be found as homodimers or heterodimers.
Synonyms	BMP4, ZYME, BMP2B, OFC11, BMP2B1, MCOPS6
AA Sequence	SPKHHSQRAR KKNKNCRRHS LYVDFSDVGW NDWIVAPPGY QAFYCHGDCP FPLADHLNST NHAIVQTLVN SVNSSIPKAC CVPTELSAIS MLYLDEYDKV VLKNYQEMVV EGCGCR
Source	*Escherichia coli*
Molecular Weight	Approximately 13 kDa, a monomeric, non-glycosylated polypeptide chain containing 116 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 (1mg/ml) solution in 20mM Na_2CO_3 buffer, pH 9.0.
Endotoxin	< 1EU/µg of growth factor as determined by LAL method.
Reconstitution	Reconstitute in sterile distilled water containing 0.1% BSA 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 *in vitro* diagnostic procedures.