

Technical Data Sheet

Flogen[®] Recombinant Human Bone Morphogenetic Protein-4(rHuBMP-4)

Catalog Number:	PGR0108-004
Source:	<i>Escherichia coli</i> .
Molecular Weight:	Approximately 13 kDa, a monomeric, non-glycosylated polypeptide chain containing 116 amino acids.
Quantity:	2µg/10µg/1mg
AA Sequence	SPKHHSQRAR KKNKNCRRHS LYVDFSDVGW NDWIVAPPGY QAFYCHGDCP FPLADHLNST NHAIVQTLVN SVNSSIPKAC CVPTELSAIS MLYLDEYDKV VLKNYQEMVV EGCGR
Purity:	>95% by SDS-PAGE and HPLC analyses.
Biological Activity:	Fully biologically active when compared to standard. The ED ₅₀ determined by inducing alkaline phosphatase production of murine ATDC5 cells is less than 30 ng/ml, corresponding to a specific activity of > 3.3 × 10 ⁴ IU/mg.
Appearance:	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation:	Lyophilized from a 0.2µm filtered concentrated solution in 20mM Na ₂ CO ₃ buffer, pH 9.0.
Endotoxin:	Less than 1EU/µg of rHuBMP-4 as determined by LAL method.
Applications:	1. Molecular standard (Western, ELISA) in studying secreted BMP-4; 2. Preparing antibodies for BMP-4 monomer; 3. Molecule standard in detecting secreted BMP-4 in reduced SDS-PAGE.
Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at <-20°C. Further dilutions should be made in appropriate buffered solutions.
Storage:	This lyophilized preparation is stable at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.
Usage:	This material is for research, laboratory or further evaluation purposes. NOT FOR HUMAN USE

Human Bone Morphogenetic Protein-4

Human Bone Morphogenetic Protein-4 (BMP-4) is one of at least 15 structurally and functionally related BMPs, which are members of the transforming growth factor β (TGF-β) superfamily. BMPs 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. BMP-4 is synthesized as large precursor molecules which are cleaved by proteolytic enzymes. The active form can consist of a dimer of two identical proteins or a heterodimer of two related bone morphogenetic proteins.