



## Bone Morphogenetic protein-5, human recombinant (rHuBMP-5)

**Catalog No:** 97274  
**Lot No:** XXXXX  
**Source:** *E. coli*  
**Synonyms:** Bone morphogenetic protein 5, BMP-5, BMP5, MGC34244

### Background

BMP5 belongs to the bone morphogenetic protein family which is part of the transforming growth factor-beta superfamily. This superfamily is comprised of large families of growth and differentiation factors. Bone morphogenetic proteins were initially identified by their ability of demineralizing bone extract to induce endochondral osteogenesis in vivo in an extraskeletal site. BMP5 is an essential signaling molecule within the trabecular meshwork and optic nerve head, and may play a potential role in glaucoma pathogenesis. It was shown that BMP-5 increases the levels of osteopontin, BMP-2, alkaline phosphatase and core binding factor alpha 1 mRNAs in human periodontal (HPL) ligament cells. The BMP5 protein is expressed in normal synovial tissue and reduced in osteoarthritis and rheumatoid arthritis. BMP5 may have a role in certain cancers given that it is differentially regulated during the formation of different tumors.

### Description

BMP-5 human recombinant produced in *E. coli* is a single, non-glycosylated, polypeptide chain containing 139 amino acids (317-454) and having a total molecular mass of 15.7 kDa. BMP-5 is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered colorless solution.

### Formulation

The BMP-5 solution contains 10 mM sodium citrate buffer (pH3.5) and 10% glycerol.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Purity

Greater than 95.0% as determined by SDS-PAGE.

### Amino Acid Sequence

MAANKRKNQN RNKSSSHQDS SRMSSVGDYN TSEQKQACKK HELYVSFRDL GWQDWIIAPE GYAAFYCDGE CSFPLNAHMN  
ATNHAIIVQTL VHLMPDHVP KPCCAPTKLN AISVLYFDSD SNVILKKYRN MVVRSCGCH

### Usage

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