



## Bone Morphogenetic protein-7, His Tag, tobacco, human recombinant (rHuBMP-7-His)

**Catalog No:** 97423  
**Lot No:** XXXXX  
**Source:** *Nicotiana benthamiana*  
**Synonyms:** Osteogenic Protein 1, BMP-7

### Background

The bone morphogenetic proteins (BMPs) are a family of secreted signaling molecules that can induce ectopic bone growth. Many BMPs are part of the transforming growth factor-beta (TGFB) superfamily. BMPs were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extraskeletal site. Based on its expression early in embryogenesis, the BMP encoded by this gene has a proposed role in early development. In addition, the fact that this BMP is closely related to BMP5 and BMP7 has led to speculation of possible bone inductive activity.

### Description

Bone Morphogenetic protein-7 human recombinant produced in plant is a monomeric, glycosylated, polypeptide chain containing 144 amino acids and having a molecular mass of 16.5 kDa. BMP-7 is fused to a 6xHis Tag at the N-terminus and is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile filtered white lyophilized (freeze-dried) powder.

### Formulation

BMP-7 was lyophilized from a solution containing 0.05 M Tris-HCl buffer at pH 7.4.

### Solubility

Lyophilized BMP-7 protein should be reconstituted in distilled water to a concentration of 50 ng/μl.

### Stability

Lyophilized BMP-7, although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution BMP 7 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Purity

Greater than 97.0% as determined by SDS-PAGE.

### Amino Acid Sequence

HHHHHHSTGS KQRSQNRSKT PKNQEALRMA NVAENSSSDQ RQACKKHELY VSFRDLGWQD WIIAPEGYAA YYCEGECAFP  
LNSYMNATNH AIVQTLVHFI NPETVPKPCCT APTQLNAISV LYFDDSSVIL KKYRNMVVRA CGCH

### Activity

The biological activity of BMP-7 was measured by its ability to induce alkaline phosphatase production by ATDC5 cells, ED50 is less than 40 ng/ml, corresponding to a specific activity of 25,000 units/mg.

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### Usage

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