BMP-7, active, human recombinant, expressed in *Nicotiana benthamiana*

Catalog Number B0814
Storage Temperature –20 °C

**Synonyms:** Bone morphogenetic protein 7, OP1, osteogenic protein

**Product Description**
The bone morphogenetic proteins (BMPs) are a family of secreted signaling molecules that can induce ectopic bone growth. BMPs were originally identified by the ability of demineralized bone extract to induce endochondral osteogenesis *in vivo* in an extraskeletal site.

Bone morphogenetic protein 7 (BMP-7), also known as osteogenic protein 1 (OP1), is a widely expressed TGF-β superfamily member with important functions during embryogenesis, in the adult, and in disease. BMP-7 plays a role in a variety of organ systems. It promotes new bone formation and nephron development, inhibits the branching of prostate epithelium, and antagonizes epithelial mesenchymal transition. In pathological conditions, BMP-7 inhibits tumor growth and metastasis, ameliorates fibrotic damage in nephritis, and promotes neuroregeneration following brain ischemia.

Recombinant human BMP-7 is produced by transient expression of BMP-7 in non-transgenic plants. It contains a 6-His-tag at the N-terminal end.

BMP-7, active is purified by sequential chromatography (FPLC). It is an animal component-free product, containing no animal-derived components or impurities. The recombinant protein is lyophilized from a solution of 0.05 M Tris-HCl, pH 7.4

**Molecular mass:** −16.5 kDa

**Sequence:** single chain, containing 144 amino residues

**Endotoxin:** <0.04 EU/1 µg of the protein (LAL method)

**Precautions and Disclaimer**
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

**Preparation Instructions**
The lyophilized protein should be reconstituted in water to a concentration of 50 ng/µL. It is recommended to use a carrier protein (0.1% HSA or BSA).

**Storage/Stability**
The product is shipped ambient. Upon receiving, store it immediately at −20 °C. Avoid repeated freeze/thaw cycles.
References