

BMP-7, Human

Cat. No.: Z02751-10

Size: 10.0 ug

Synonyms: Bone Morphogenetic Protein-7 (BMP-7), Human;

Description:

Human BMP-7 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-7 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.

Amino Acid Sequence:

```
00001 STGSKQRSQN RSKTPKNQEA LRMANVAENS SSDQRQACKK
00041 HELYVSFRDL GWQDWIIAPE GYAAYYCEGE CAFPLNSYMN
00081 ATNHAIIVQTL VHFINPETVP KPCCAPTQLN AISVLYFDDS
00121 SNVILKKYRN MVRACGCH
```

Source: *E. coli*

Species: Human

Biological Activity: Unit Definition: One unit is defined as the amount of enzyme needed to cleave 3 μ g of fusion protein in 1 hour to 85 % completion at 30°C in a buffer containing 50 mM Tris-HCl, pH 8.0, 0.5 mM EDTA, and 1 mM DTT.

Molecular Weight: Approximately 15.7 kDa, a monomeric, non-glycosylated polypeptide chain containing 139 amino acids.

Formulation: Lyophilized from a 0.2 μ m filtered concentrated solution in 30% acetonitrile, 0.1% TFA.

Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 10mM HAc 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.

Purity: >95% by SDS-PAGE and HPLC analyses.

Endotoxin Level: Less than 0.2EU/ug of rHuBMP-7 as determined by LAL method.

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.