



## *Recombinant Human BMP-2* (Bone Morphogenetic Protein-2)

*Catalog Number: 100-53*

### *Specifications and Uses:*

**Alternate Names:** BMP-2A

**Description:**

BMP-2 is a member of the Bone Morphogenetic Protein family important for the development of bone and cartilage. BMP-2 is related to TGF- $\beta$  and Sonic Hedgehog proteins. In general, BMP proteins are synthesized as large precursor molecules which are cleaved by proteolytic enzymes. The active form of BMPs can consist of a dimer of two identical proteins or a heterodimer of two related bone morphogenetic proteins. BMPs signal through type I and type II receptor tyrosine kinases and signal through SMAD proteins. Recombinant human BMP-2 is a non-glycosylated homodimer, containing two 115 amino acid chains, having a molecular mass of 26 kDa.

**Source:** *E.coli*

**Physical Appearance:** Sterile Filtered white lyophilized (freeze-dried) powder.

**Formulation and Stability:**

Recombinant human BMP-2 was lyophilized from a concentrated (1mg/ml) sterile solution containing 10 mM sodium citrate pH 3.0.

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

**Protein Content and Purity determined by:**

UV spectroscopy at 280 nm.

RP-HPLC calibrated against a known standard.

Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

**Endotoxin Level:** Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

**Biological Activity:**

The activity is determined by the alkaline phosphatase activity in ATDC-5 cells and is typically 0.3-1 ug/mL.

**AA Sequence:**

MQAKHKQRKR LKSSCKRHPL YVDFSDVGWN DWIVAPPGYH AFYCHGEC PF PLADHLNSTN HAIVQTLVNS  
VNSKIPKACC VPTLSAISM LYLDENEKVV LKNYQDMVVE GCGCR

**THIS PRODUCT IS FOR RESEARCH USES ONLY AND IS NOT FOR USE IN HUMANS!**