



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

Catalog Number: 100-53
Accession Number: PI2643

Specifications and Uses:

Alternate Names: BMP-2A

Description:

BMP-2 is a member of the Bone Morphogenetic Protein (BMPs) family, which are important for the development of bone and cartilage. BMP-2 is related to TGF- β and Sonic Hedgehog (SHH) 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, with a molecular weight of 26 kDa.

Source: *E.coli*

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

Formulation and Stability:

Recombinant human BMP-2 is 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 (typically $\geq 97\%$) determined by:

HPLC, Reducing and Non-reducing SDS-PAGE, UV spectroscopy at 280 nm

Endotoxin Level:

Measured by kinetic LAL analysis and is typically ≤ 1 EU/ μ g protein.

Biological Activity:

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

AA Sequence:

MQAKHKQRKR LKSSCKRHPL YVDFSDVGWN DWIVAPPGYH AFYCHGECPP PLADHLNSTN HAIVQTLVNS
VNSKIPKACC VPTELSAISM LYLDENEKVV LKNYQDMVVE GCGCR

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

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