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Certificate of Analysis and Data Sheet

Recombinant Human Bone Morphogenetic Protein-2

Catalog No.
228-10128

Source
Escherichia Coli

Synonyms

BMP-2, BMP2A.

Introduction

BMP2 belongs to the transforming growth factor-beta (TGFB) superfamily. Bone morphogenic protein induces bone formation. BMP2 is a candidate gene for the autosomal dominant disease of fibrodysplasia (myositis) ossificans progressiva.

Description

Bone Morphogenetic Protein-2 Human Recombinant produced in E.Coli is a homodimeric, non-glycosylated, Polypeptide chain containing 115 amino acids and having a molecular mass of 26018 Dalton.

The BMP-2 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

BMP2 was lyophilized from a concentrated (1mg/ml) sterile solution containing 10mM sodium citrate pH=3.5.

Solubility

It is recommended to reconstitute the lyophilized Bone Morphogenetic Protein-2 in sterile 100mM AcOH (acetic Acid) not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Stability

Lyophilized Bone Morphogenetic Protein-2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution BMP2 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 95.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

Amino acid sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Met-Gln-Ala-Lys-His.

Biological Activity

1. The ED_{50} as determined by the cytolysis of MC3T3-E1 cells is < 50 ng/ml corresponding to a Specific Activity of 20,000IU/mg.

Protein content

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm using the absorbency value of 1.4 as the extinction coefficient for a 0.1% (1mg/ml) solution. This value is calculated by the PC GENE computer analysis program of protein sequences (IntelliGenetics).
2. Analysis by RP-HPLC, using a standard solution of BMP-2 as a Reference Standard.

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