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Certificate of Analysis and Data Sheet

Recombinant Human Bone Morphogenetic Protein-4

Catalog No.
228-10131

Source
Escherichia coli

Synonyms:

BMP4, ZYME, BMP2B, BMP2B1.

Introduction

The protein encoded by this gene is a member of the bone morphogenetic protein family which is part of the transforming growth factor-beta superfamily. The superfamily includes large families of growth and differentiation factors. Bone morphogenetic proteins were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extraskeletal site. This particular family member plays an important role in the onset of endochondral bone formation in humans, and a reduction in expression has been associated with a variety of bone diseases, including the heritable disorder Fibrodysplasia Ossificans Progressiva. Alternative splicing in the 5' untranslated region of this gene has been described and three variants are described, all encoding an identical protein.

Description

Bone Morphogenetic Protein-4 Human Recombinant produced in *E. coli* is a monomeric, non-glycosylated, Polypeptide chain containing 116 amino acids and having a molecular mass of 13,009 Dalton.

The BMP-4 is purified by proprietary chromatographic techniques.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

BMP-4 was lyophilized from a concentrated (1 mg/ml) solution containing no additives.

Solubility

It is recommended to reconstitute the lyophilized Bone Morphogenetic Protein-4 in sterile 20 mM AcOH (acetic Acid) not less than 100 µg/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-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution BMP4 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 Ser-Pro-Lys-His-His.

Applications

1. Molecular standard (Western, ELISA) in studying secreted BMP-4.
2. Preparing antibodies for BMP-4 monomer.
3. Molecule standard in detecting secreted BMP-4 in reduced SDS-PAGE.

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