

Recombinant Human Bone Morphogenetic Protein-4 (BMP-4)

Certificate of Analysis and Data Sheet

➤ Source: E.Coli	➤ Catalog No. CTK-361
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➤ **Background :**

BMP-7 (osteogenic protein 1) belongs to the Bone-growth regulatory factors that are members of the transforming growth factor-beta (TGF-beta) superfamily of proteins. They are 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.

➤ **Description :**

Recombinant Human BMP-4 produced in E.Coli is a monomeric, non-glycosylated, Polypeptide chain containing 116 amino acids and having a molecular mass of 13009 Dalton.

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 (1mg/ml) sterile solution containing no additives.

➤ **Solubility:**

It is recommended to reconstitute the lyophilized BMP-4 in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

➤ **Stability:**

Lyophilized BMP-4 although stable at room temperature for 3 weeks, should be stored desiccated below -18 C. Upon reconstitution BMP-4 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 avoid freeze-thaw cycles.

➤ **Purity:**

Greater than 95.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

➤ **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.

➤ **Dimers and aggregates:**

Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

➤ **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.

➤ **Endotoxin:**

Less than 0.1 ng/μg (IEU/μg) of Bone Morphogenetic protein-4 .

➤ **Protein content:**

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm
2. Analysis by RP-HPLC, using a standard solution of BMP-4 as a Reference Standard.

➤ **Usage:**

This material is offered for research, laboratory or further evaluation purposes.