



## PRODUCT DATA SHEET

**Product:** Bone Morphogenetic protein-7 CHO (BMP-7 CHO), (human recombinant)

**Cat. No.:** BP-022 (10 µg)

**Synonyms:**

Osteogenic Protein 1, OP-1, BMP-7

**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:**

N-Terminal-human BMP-2 (Met 1 – Arg 282) human BMP-7 (Ser 293 – Arg 431)-C-TERMINAL. The DNA sequence encoding the human BMP-2 signal peptide and propeptide (1~282 amino acids) fused to the human BMP-7 mature chain (293~431 amino acids) was expressed in a Chinese hamster Ovary cell line. The mature recombinant BMP-7 generated by the proteolytic removal of the signal peptide and propeptide contains 139 amino acid residues. The glycosylation of BMP-7 increases the molecular mass and the glycosylated proteins migrate as 25 ~ 40 kDa in SDS-PAGE under non-reducing conditions.

**Format:**

White lyophilized powder from a concentrated (1 mg/mL) sterile solution containing 1% sucrose, 1.2% mannitol, 20 mM glycine, and 0.005% tween 20, pH 4. BMP-7 is purified by proprietary chromatographic techniques.

**Storage:**

Lyophilized protein is stable for at least 3 weeks at room temperature. Long term storage should be below -18°C, desiccated. Upon reconstitution, human recombinant BMP-7 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). Aliquot to avoid freeze-thaw cycles.

**Reconstitution:**

It is recommended to reconstitute the lyophilized human recombinant Bone Morphogenetic Protein-7 in sterile 20 mM AcOH (acetic Acid) at not less than 100 µg/mL, which can then be further diluted to other aqueous solutions.

**Purity:**

>97% determined by RP-HPLC, and SDS-PAGE.

**Biological Activity:**

Measured in alkaline phosphatase activity assay using MC3T3-E1 cells. The ED<sub>50</sub> for this effect is <100 ng/mL.

**Limitations:**

For *in vitro* research use only. Not for use in diagnostics or in humans.

**Warranty:**

No warranties, expressed or implied, are made regarding the use of this product. KAMIYA BIOMEDICAL COMPANY is not liable for any damage, personal injury, or economic loss caused by this product.