

## BMP-7 CHO

### Bone Morphogenetic Protein-7

#### human, recombinant, Chinese hamster ovary (CHO) cells

Cat. No.	Amount
PR-694	10 µg

For *in vitro* use only  
Quality guaranteed for 12 months  
Store at -20°C

#### Avoid freeze / thaw cycles

#### Form

Lyophilized. BMP-7 was lyophilized from a 1 mg/ml solution containing 1% sucrose, 1.2% mannitol, 20mM glycine, 0.005% Tween20 and pH 4.0.

#### Solubility

It is recommended to reconstitute the lyophilized BMP-7 in 1 ml sterile/endotoxin free bidest. H<sub>2</sub>O.

#### Activity

The ED<sub>50</sub> for an alkaline phosphatase activity assay using MC3T3-E1 cells is < 100ng/ml.

#### Purity

≥ 95% by SDS-PAGE and RP-HPLC

#### Description

The bone morphogenetic proteins (BMPs) are part of the secreted signalling molecules that can induce ectopic bone growth. Based on its early expression in embryogenesis this gene plays a proposed role in early development. In addition that this BMP is closely related to BMP-5 and BMP-7 has lead to speculation of possible bone inductive activity. N-terminal– human BMP-2(Met1-Arg 282)human BMP-7(Ser293-Arg431)– C-terminal 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 glycosilation of BMP-7 increases the molecular mass and the glycosilated protein migrates at 25-40kDa under non-reducing conditions.

#### Selected References:

- Wang *et al.* (2004) Bone morphogenetic protein-7 signals opposing transforming growth factor beta in mesangial cells. *J. Biol. Chem.* **279**:23200.
- Simon *et al.* (2002) Cloning of the 5'-flanking region of the murine bone morphogenetic protein-7 gene. *Mol. Cell Biochem.* **233**:31.
- Kontaxis *et al.* (2004) Mechanical testing of recombinant human bone morphogenetic protein-7 regenerated bone in sheep mandibles. *Proc. Inst. Mech. Eng. [H]* **218**:381.
- Roldan *et al.* (2004) Sinus floor augmentation with simultaneous placement of dental implants in the presence of platelet-rich plasma or recombinant human bone morphogenetic protein-7. *Clin. Oral. Implants Res.* **15**:716.
- Abu-Serriah *et al.* (2004) Histological assessment of bioengineered new bone in repairing osteoperiosteal mandibular defects in sheep using recombinant human bone morphogenetic protein-7. *Br. J. Oral. Maxillofac. Surg.* **42**:410.
- Li *et al.* (2004) Bone morphogenetic protein 7: a novel treatment for chronic renal and bone disease. *Curr. Opin. Nephrol. Hypertens.* **13**:417.
- Borovecki *et al.* (2004) Bone morphogenetic protein-7 from serum of pregnant mice is available to the fetus through placental transfer during early stages of development. *Nephron. Exp. Nephrol.* **97**:e26.
- Kawaguchi *et al.* (2004) Are recombinant human bone morphogenetic protein-7 and tobramycin compatible? An experiment in rats. *J. Orthop. Trauma.* **18**:225.