

# Datasheet

## Recombinant Human BMP-4

## CARRIER-FREE

**Catalog Number:** PR15015CF

**Product Type:** Recombinant protein

**Source:** The DNA sequence encoding the human BMP-2 signal peptide and propeptide (amino acid residues 1 - 282 of human BMP-2) fused to the human BMP-4 mature chain (amino acid residues 293 - 408 of human BMP-4) (Wozney, J. *et al.*, 1988, *Science* **242**:1528 - 1534) was expressed in a mouse myeloma cell line, NS0.

**Molecular Mass:** The mature recombinant human BMP-4, generated by the proteolytic removal of the signal peptide and propeptide, is a disulfide-linked homodimeric protein consisting of two 116 amino acid residue subunits. The monomer has a calculated molecular mass of approximately 13 kDa. Due to glycosylation, the monomer migrates as an approximately 22 kDa protein under reducing conditions in SDS-PAGE.

**Purity:** > 95%, as determined by SDS-PAGE and visualized by silver stain.

**Endotoxin Levels:** < 1.0 EU per 1 µg of the cytokine as determined by the LAL method.

**Activity:** Measured by its ability to induce alkaline phosphatase production by mouse ATDC5 chondrogenic cells (Nakamura, K. *et al.*, 1999, *Exp. Cell Res.* **250**:351).

The ED<sub>50</sub> for this effect is typically 10 - 30 ng/mL.

**Format:** Lyophilized from a 0.2 µm filtered solution in 30% acetonitrile, 0.1% TFA.

**Reconstitution:** It is recommended that sterile 4 mM HCl be added to the vial to prepare a working stock solution of no less than 100 µg/mL. The carrier-free protein should be used immediately upon reconstitution to avoid losses in activity due to non-specific binding to the inside surface of the vial. For long term storage as a dilute solution, a carrier protein (*e.g.* 0.1% HSA or BSA) should be added to the vial.

**Storage:** Lyophilized samples are stable for up to six months at -20° C to -70° C.

Upon reconstitution, this cytokine, in the presence of a carrier protein, can be stored under sterile conditions at 2 - 8° C for one month or at -20° C to -70° C **in a manual defrost freezer** for three months without detectable loss of activity.

**Avoid repeated freeze-thaw cycles.**