

**BMP-2/LEM/MCF, Human, Recombinant**

Cat. No. : PCK273

**General Information**

|                        |                                                                                                                                                                                                              |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Synonyms</b>        | Endogenous Mediator (LEM); Mononuclear Cell Factor (MCF)                                                                                                                                                     |
| <b>Species</b>         | Human                                                                                                                                                                                                        |
| <b>Expression host</b> | E.coli                                                                                                                                                                                                       |
| <b>Sequence</b>        | MQAKHKQRKRLKSSCKRHPLYVDFSDVGWNDWIVAPPGYHAFYCHGECPPFLADHLNSTNH<br>AIVQTLVNSVNSKIPKACCVPTLSAISMLYLDENEKVVLKNYQDMVVEGCGCR with<br>polyhistidine tag at the C-terminus.                                          |
| <b>Accession</b>       | P12643                                                                                                                                                                                                       |
| <b>Tag</b>             | His-tag at the C-terminus                                                                                                                                                                                    |
| <b>Mol mass</b>        | 13.76 kDa                                                                                                                                                                                                    |
| <b>Expiration date</b> | 12 months                                                                                                                                                                                                    |
| <b>Bio activity</b>    | Measure by its ability to induce alkaline phosphatase production by ATDC5 cells. The<br>ED50 for this effect is < 9.5 ng/mL. The specific activity of recombinant BMP-2 is > 3.2 ×<br>10 <sup>6</sup> IU/mg. |

**Product feature**

|                          |                                                                                                                                                                                                                                                                                                                            |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Purity</b>            | > 95% as determined by SDS-PAGE. Ni-NTA chromatography.                                                                                                                                                                                                                                                                    |
| <b>Endotoxin (EU/μg)</b> | < 0.1                                                                                                                                                                                                                                                                                                                      |
| <b>Storage</b>           | Lyophilized protein should be stored at -5~-20°C for 1 year. Upon reconstitution, store at 2-8°C for up to 1 week. Further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA, 10% FBS, 5% HSA or 5% trehalose solution), protein aliquots should be stored at -5~-20°C or -80°C for 3-6 months. |
| <b>Shipping</b>          | Ice bag                                                                                                                                                                                                                                                                                                                    |
| <b>Formulation</b>       | The protein was lyophilized from a 0.2 μm filtered solution containing 20 mM sodium citrate, 0.2 M NaCl, pH 3.5.                                                                                                                                                                                                           |
| <b>Reconstitution</b>    | It is recommended to reconstitute the lyophilized protein in sterile water to a concentration not less than 100 μg/mL. Do Not Vortex! Vigorous shaking may impair the biological activity of the protein.                                                                                                                  |

**Background**

BMP-2 like other bone morphogenetic proteins, plays an important role in the development of bone and cartilage. It is involved in the hedgehog pathway, TGF beta signaling pathway, and in cytokine-cytokine receptor interaction. It is also involved in cardiac cell differentiation and epithelial to mesenchymal transition. Like many other proteins from the BMP family, BMP-2 has been demonstrated to potently induce osteoblast differentiation in a variety of cell types. BMP-2 may be involved in white adipogenesis and may have metabolic effects.

### SDS-PAGE

