

## Active Recombinant Human BMP7

Cat. No. BMP7-105H    Lot. No. (See product label)

### SPECIFICATION

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Overview | Recombinant Human BMP7 was expressed in HEK293 stable cell line.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Species          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Source           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Description      | The bone morphogenetic proteins (BMPs) are a family of secreted signaling molecules that can induce ectopic bone growth. Many BMPs are part of the transforming growth factor-beta (TGFB) superfamily. BMPs were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extraskeletal site. Based on its expression early in embryogenesis, the BMP encoded by this gene has a proposed role in early development and possible bone inductive activity. |
| Form             | The protein was lyophilized after filtrated through a 0.22 µm filter. Before lyophilization, the protein is usually in PBS buffer.                                                                                                                                                                                                                                                                                                                                                                                   |
| Bio-activity     | 50-250 ng/mL ED50. The specific activity was determined by the dose dependent induction of alkaline phosphatase in the ATDC-5 cell line (Mouse chondrogenic cell line).                                                                                                                                                                                                                                                                                                                                              |
| Molecular Mass   | This protein is a disulfide linked homodimeric glycoprotein with an apparent molecular mass of 30 to 38 kDa.                                                                                                                                                                                                                                                                                                                                                                                                         |
| Endotoxin        | The protein was purified from endotoxin-free mammalian cell culture under strict                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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endotoxin-free conditions. No endotoxin was detected in final product using LAL method to the method's sensitivity level ( $< 1.0$  EU/g).

**Purity** > 95% as determined by SDS-PAGE

**Storage** Lyophilized form is stable at room temperature for 3 weeks. Keep desiccated at below  $-18^{\circ}\text{C}$  for long term storage. After reconstituted, store at  $4^{\circ}\text{C}$  for 2-7 days or at below  $-18^{\circ}\text{C}$  for up to 3 months.

**Reconstitution** Reconstitute lyophilized powder with water to no less than 100 g/ml, which can be further diluted in other desired aqueous solutions. It is recommended that 0.1% rHSA as a carrier protein if concentration is less than 100 g/ml.

## GENE INFORMATION

**Gene Name** BMP7 bone morphogenetic protein 7 [ Homo sapiens (human) ]

**Official Symbol** BMP7

**Synonyms** BMP7; OP-1; bone morphogenetic protein 7; osteogenic protein 1

**Gene ID** 655

**mRNA Refseq** NM\_001719

**Protein Refseq** NP\_001710

**MIM** 112267

**UniProt ID** P18075

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|----------------------------|------------------------------------------------------------------------------------------|
| <b>Chromosome Location</b> | 20q13                                                                                    |
| <b>Pathway</b>             | ALK2 signaling events; Cytokine-cytokine receptor interaction; Endochondral Ossification |
| <b>Function</b>            | cytokine activity; growth factor activity; contributes_to protein binding                |

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