

## Recombinant Human BMP7 / Bone Morphogenetic Protein 7, Animal Free & Carrier Free

Cat #: C-CYP255

Size: 5µg, 20µg, 100µg, 500µg, 1mg

Shipping: Blue Ice

### Product Overview

BMP-7 (Bone morphogenetic protein 7) is a bone morphogenetic protein which belongs to the TGF-β superfamily. OP-1 is expressed in the brain, kidneys, and bladder. BMP-7 may be involved in bone homeostasis and plays a key role in the transformation of mesenchymal cells into bone and cartilage. The phosphorylation of SMAD1 and SMAD5 can be induced by BMP-7, which in turn induce transcription of numerous osteogenic genes. BMP-7 treatment can also induce all of the genetic markers of osteoblast differentiation in many cell types. Human recombinant BMP-7 protein can be used to aid in the fusion of vertebral bodies to prevent neurologic trauma. It also functions in the treatment of tibial non-union, frequently in cases where a bone graft has failed. It is found that BMP7 has the potential for treatment of chronic kidney disease.

### Product Information

**Source:** *Escherichia Coli*.

**Purity:** >95% as determined by SDS-PAGE. Ni-NTA chromatography.

**Biological Activity:** Measure by its ability to induce alkaline phosphatase production by ATDC5 cells. The ED<sub>50</sub> for this effect is < 0.65 µg/mL.

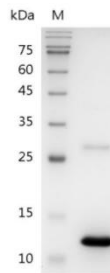
**Endotoxin:** <0.1EU per 1µg of the protein by the LAL method.

**Amino acid sequence:**

MANVAENSSSDQRQACKKHELYVSFRDLGWQDWIIAPEGYAAYYCEGECAPFLNSYMNATNHAIVQTLVHFINPETVVPKCCAPTQLNAI

SVLYFDDSSNVILKKYRNMVVRACGCH with polyhistidine tag at the C-terminus.

**Formulation:** Lyophilized from a sterile filtered aqueous solution in 20 mM sodium citrate, 0.2 M NaCl, pH 3.5



SDS-PAGE analysis of recombinant human BMP7

## Usage Method

1. Before opening, it is recommended to centrifuge at 3000-3500 rpm for 5 minutes.
2. Reconstitute to a concentration of 0.1-1.0 mg/mL in sterile distilled H<sub>2</sub>O. Allow the solution to sit at room temperature for at least 20 minutes to ensure complete dissolution. Avoid vigorous vortexing.
3. The reconstituted solution can be stored at 2-8°C for up to 1 week.
4. For long-term storage, it is recommended to further dilute the solution with a carrier protein (such as 0.1% BSA, 10% FBS, or 5% HSA) to a concentration of no less than 10 µg/mL and aliquot for storage at -20°C to -80°C for 3 to 6 months. If serum-free experiments are required, a 5% trehalose solution can be used as a carrier instead. Avoid repeated freeze-thaw cycles.

## Storage

Physical Appearance	Storage	Stability
Lyophilized powder	-20°C to -80°C	1 year
Reconstitution (initial)	2°C to 8°C	Less than 1 week
Reconstitution (after dilution)	-20°C to -80°C	3 to 6 months

## Note

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.