

## Bone Morphogenetic Protein-2 Human E. coli

### Product Data Sheet

<b>Type:</b> Recombinant	<b>Cat. No.:</b>	
<b>Source:</b> E. coli	RBG10082002	(2 µg)
<b>Species:</b> Human	RBG10082010	(10 µg)
<b>Other names:</b> BMP-2	RBG10082100	(100 µg)

### Description

BMPs (Bone Morphogenetic Proteins) belong to the TGF-beta superfamily of structurally related signaling proteins. BMP-2 is a potent osteoinductive cytokine, capable of inducing bone and cartilage formation in association with osteoconductive carriers such as collagen and synthetic hydroxyapatite. In addition to its osteogenic activity, BMP-2 plays an important role in cardiac morphogenesis, and is expressed in a variety of tissues, including lung, spleen, brain, liver, prostate ovary and small intestine. The functional form of BMP-2 is a 26 kDa protein composed of two identical 114 amino acid polypeptide chains linked by a single disulfide bond. Each BMP-2 monomer is expressed as the C-terminal part of a precursor polypeptide, which also contains a 23 amino acid signal sequence for secretion, and a 259 amino acid propeptide. After dimerization of this precursor, the covalent bonds between the propeptide (which is also a disulfide-linked homodimer) and the mature BMP-2 ligand are cleaved by a furin-type protease. Recombinant Human BMP-2 is a 26.0 kDa homodimeric protein consisting of two 115 amino acid polypeptide chains. Manufactured using all Animal-Free reagents.

### Amino Acid Sequence

MQAKHKQRKR LKSSCKRHPL YVDFSDVGWN DWIVAPPGYH AFYCHGECPF PLADHLNSTN HAIVQTLVNS VNSKIPKACC  
VPTELSAISM LYLDENEKVV LKNYQDMVVE GCGCR

### Source

E. coli

### Purity

98%

### Biological Activity

Determined by its ability to induce alkaline phosphatase production by ATDC-5 cells. The expected ED<sub>50</sub> for this effect is 0.5-1.0 µg/ml.

### Endotoxin

Endotoxin level is <0.1 ng/µg of protein (<1EU/µg).

### Reconstitution

Centrifuge the vial prior to opening. Reconstitute in water containing BSA (50ug of BSA per 1ug of protein) to a concentration of 0.1-1.0 mg/ml. Do not vortex. For extended storage, it is recommended to further dilute in a buffer containing a carrier protein (example 0.1% BSA) and store in working aliquots at -20°C to -80°C

### Storage, Stability/Shelf Life

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