

## Recombinant Human BMP3 protein

Cat. No. BMP3-922H    Lot. No. (See product label)

### SPECIFICATION

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Overview | Recombinant Human BMP3 protein was expressed in Escherichia coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Species          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Source           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| ProteinLength    | 110                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Description      | Bone Morphogenetic Protein 3 is one of the BMPs, some of which belong to the TGF-beta superfamily (BMP2-7). There are more than thirteen BMPs have been discovered nowadays and they are involved in inducing cartilage and bone formation. BMPs were originally identified as protein regulators of cartilage and bone formation. They have since been shown to be involved in embryogenesis and morphogenesis of various tissues and organs. BMPs also regulate the growth, differentiation, chemotaxis, and apoptosis of various cell types. Similar to most other TGF-beta family proteins, BMPs are highly conserved across animal species. At the amino acid sequence level, mature human and rat BMP-3 are 98% identical. |
| Form             | Lyophilized from a 0.2µm filtered concentrated solution in 30 % Acetonitrile and 0.1 % TFA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Bio-activity     | Fully biologically active when compared to standard. The ED50 as determined by its ability to inhibit BMP-2-induced activity in murine MC3T3-E1 cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Molecular Mass   | Approximately 24.8 kDa, a homodimeric protein consisting of two 110 amino acid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|                       |                                                                                                                                                                                                                                                                                                                                       |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | non-glycosylated polypeptide chains.                                                                                                                                                                                                                                                                                                  |
| <b>AA Sequence</b>    | QWIEPRNCARRYLKVDFADIGWSEWIISPKSFDAYYCSGACQFMPKSLKPSNHATI<br>QSIVRAVGWVPGIPEPCCVPEKMSSLSILFFDENKNVVLKVYPNMTVESCACR                                                                                                                                                                                                                     |
| <b>Endotoxin</b>      | Less than 1 EU/g of rHuBMP-3 as determined by LAL method.                                                                                                                                                                                                                                                                             |
| <b>Purity</b>         | >95% by SDS-PAGE and HPLC analysis.                                                                                                                                                                                                                                                                                                   |
| <b>Storage</b>        | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.                                       |
| <b>Reconstitution</b> | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in 4 mM HCl to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions. |

## GENE INFORMATION

|                        |                                                                                                                                                                        |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | <b>BMP3</b>                                                                                                                                                            |
| <b>Official Symbol</b> | <b>BMP3</b>                                                                                                                                                            |
| <b>Synonyms</b>        | BMP3; bone morphogenetic protein 3; bone morphogenetic protein 3 (osteogenic); osteogenin; BMP-3; bone morphogenetic protein-3; bone morphogenetic protein 3A; BMP-3A; |
| <b>Gene ID</b>         | <b>651</b>                                                                                                                                                             |

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|----------------|-----------|
| mRNA Refseq    | NM_001201 |
| Protein Refseq | NP_001192 |
| MIM            | 112263    |
| UniProt ID     | P12645    |

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