

## Active Human BMP2

**Cat. No.** BMP2-30H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                          |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | A DNA sequence encoding the mature form of human BMP2 ( NP_001191.1 ) ( Gln283 - Arg396 ) was expressed.                                                                                                                                                                                                                                 |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                    |
| <b>Source</b>           | Human                                                                                                                                                                                                                                                                                                                                    |
| <b>ProteinLength</b>    | 283-396 a.a.                                                                                                                                                                                                                                                                                                                             |
| <b>Description</b>      | BMP2 is a member of the BMP subgroup belonging to the transforming growth factor superfamily. The mature BMP2 acts as disulfide-linked homodimers and heterodimers with BMP7 after proteolytic removal of propeptide. BMP2 is capable of inducing the formation of cartilage and bone but are now regarded as multifunctional cytokines. |
| <b>Form</b>             | Supplied as a 0.2 µm filtered solution of 40% acetonitrile + 0.1% TFA.                                                                                                                                                                                                                                                                   |
| <b>Purity</b>           | > 98 % as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                         |
| <b>Bio-activity</b>     | Measured by its ability to induce alkaline phosphatase production by MC3T3-E1 mouse osteoblastic cells. The ED50 for this effect is typically 0.5 - 0.9 µg / ml.                                                                                                                                                                         |
| <b>Endotoxin</b>        | < 1.0 EU per µg protein as determined by the LAL method                                                                                                                                                                                                                                                                                  |
| <b>Stability</b>        | Samples are stable for up to twelve months from date of receipt at -70°C.                                                                                                                                                                                                                                                                |

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|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Predicted N terminal</b> | Met                                                                                                                                                                                                                                                      |
| <b>Molecular Mass</b>       | The recombinant human BMP2 monomer consists of 115 amino acids and has a predicted molecular mass of 13 kDa. It migrates with the apparent molecular mass of 13 & 26 kDa corresponding to the monomer & homodimer in SDS-PAGE under reducing conditions. |
| <b>Storage</b>              | Store it under sterile conditions at -70°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage. Avoid repeated freeze-thaw cycles.                                                                              |
| <b>Pathways</b>             | Adipogenesis; Basal cell carcinoma; Cytokine-cytokine receptor interaction; Heart Development; Hedgehog signaling pathway; Id Signaling Pathway; Pathways in cancer; Senescence and Autophagy; Signaling by BMP; TGF-beta signaling pathway              |

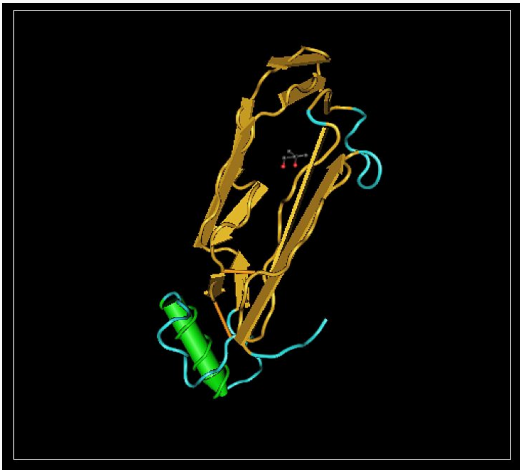
## GENE INFORMATION

|                        |                                                                                                                                                                   |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | <a href="#">BMP2 bone morphogenetic protein 2 [ Homo sapiens ]</a>                                                                                                |
| <b>Official Symbol</b> | <a href="#">BMP2</a>                                                                                                                                              |
| <b>Synonyms</b>        | BMP2; bone morphogenetic protein 2; BMP2A; BMP-2A; OTTHUMP00000030228; bone morphogenetic protein 2A; Bone morphogenetic protein 2; Bone morphogenetic protein 2A |
| <b>Gene ID</b>         | <a href="#">650</a>                                                                                                                                               |
| <b>mRNA Refseq</b>     | <a href="#">NM_001200</a>                                                                                                                                         |
| <b>Protein Refseq</b>  | <a href="#">NP_001191</a>                                                                                                                                         |
| <b>MIM</b>             | <a href="#">112261</a>                                                                                                                                            |

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|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UniProt ID</b>                 | P12643                                                                                                                                                                                                                                                                                                                                                                |
| <b>Chromosome Location</b>        | 20p12                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Function</b>                   | receptor activity; protein binding; BMP receptor binding; activin receptor activity; growth factor activity; SMAD binding; cytokine activity; phosphatase activator activity; protein domain specific binding; protein heterodimerization activity; transforming growth factor beta receptor binding; transmembrane receptor protein serine/threonine kinase activity |
| <b>PDBrendering based on 3bmp</b> |                                                                                                                                                                                                                                                                                    |