

Recombinant Human/Mouse/Rat/Bovine/Porcine BMP2 Protein

Cat. No. BMP2-02H **Lot. No.** (See product label)

SPECIFICATION

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| Product Overview | <p>Recombinant human/mouse/rat/bovine/porcine BMP-2 protein without tag was expressed in E. coli.</p> <p>Animal-free (AOF) and carrier protein-free.</p> <p>Mass spectrometry: single species with expected mass.</p> <p>Analytical reversed-phase: single sharp peak.</p> <p>Recovery from stock vial: >95%</p> |
| Species | Human |
| Source | E.coli |
| Description | <p>This gene encodes a secreted ligand of the TGF-beta (transforming growth factor-beta) superfamily of proteins. Ligands of this family bind various TGF-beta receptors leading to recruitment and activation of SMAD family transcription factors that regulate gene expression. The encoded preprotein is proteolytically processed to generate each subunit of the disulfide-linked homodimer, which plays a role in bone and cartilage development. Duplication of a regulatory region downstream of this gene causes a form of brachydactyly characterized by a malformed index finger and second toe in human patients.</p> |
| Molecular Mass | 26 kDa (dimer) |
| Endotoxin | <0.005 EU/μg protein (below level of detection) |
| Applications | iPSC and ESC maintenance and Expansion; Chemically defined media |

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| Storage | Resuspend in 10mM HCl at >100 µg/mL, prepare single use aliquots, add carrier protein if desired and store frozen at -20 or -80 centigrade |
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| Storage Buffer | Lyophilized from acetonitrile, TFA |
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GENE INFORMATION

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| Gene Name | BMP2 bone morphogenetic protein 2 [Homo sapiens (human)] |
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| Official Symbol | BMP2 |
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| Synonyms | BMP2; bone morphogenetic protein 2; BDA2; BMP2A; SSFSC; SSFSC1; bone morphogenetic protein 2; bone morphogenetic protein 2A |
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| Gene ID | 650 |
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| mRNA Refseq | NM_001200 |
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| Protein Refseq | NP_001191 |
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| MIM | 112261 |
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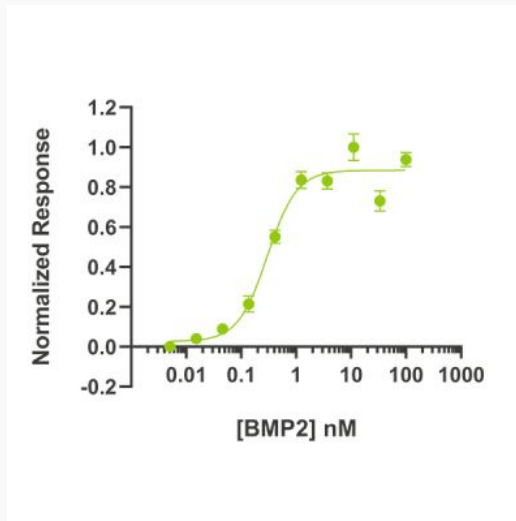
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| UniProt ID | P12643 |
|-------------------|--------|

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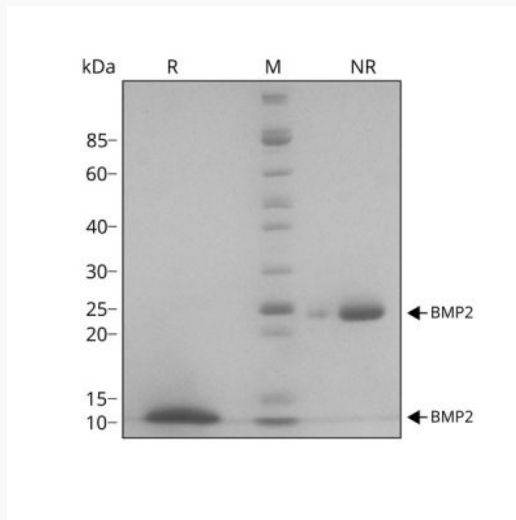
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Bioactivity



BMP2 activity Bioactivity is determined using a BMP2-responsive firefly luciferase reporter in stably transfected HEK293T cells. Cells are treated with a serial dilution of BMP2 for 6 hours. Firefly luciferase activity is measured and normalized to the control Renilla luciferase activity. EC50 = 7.81 ng/mL (0.3 nM).

Purity




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BMP2 migrates as a single band at 26 kDa in non-reducing conditions and 13 kDa as a single monomeric species upon reduction (R). No contaminating protein bands are visible. Purified recombinant protein was resolved using 15% w/v SDS-PAGE in reduced and non-reduced conditions and stained with Coomassie Brilliant Blue R250.

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