

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

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

SPECIFICATION

Product Overview	Recombinant human/mouse/rat/bovine/porcine BMP-2 protein without tag was expressed in E. coli. Animal-free (AOF) and carrier protein-free. Mass spectrometry: single species with expected mass. Analytical reversed-phase: single sharp peak. Recovery from stock vial: >95%
Species	Human
Source	E.coli
Description	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 preproprotein 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.
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

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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

Storage Buffer Lyophilized from acetonitrile, TFA

GENE INFORMATION

Gene Name BMP2 bone morphogenetic protein 2 [Homo sapiens (human)]

Official Symbol BMP2

Synonyms BMP2; bone morphogenetic protein 2; BDA2; BMP2A; SSFSC; SSFSC1; bone morphogenetic protein 2; bone morphogenetic protein 2A

Gene ID 650

mRNA Refseq NM_001200

Protein Refseq NP_001191

MIM 112261

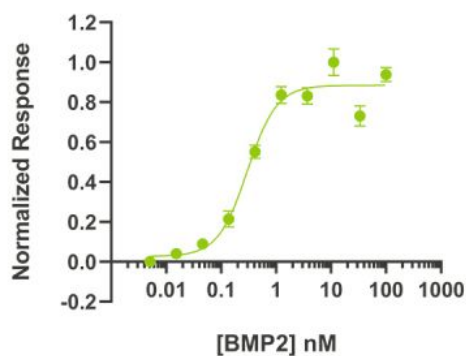
UniProt ID P12643

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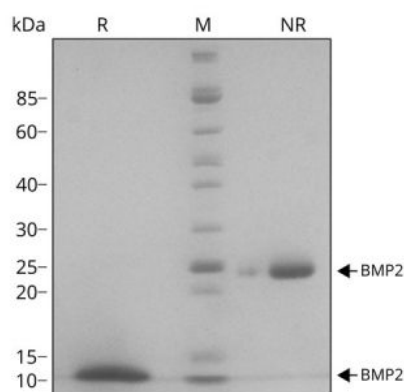
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Bioactivity



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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