

## Product datasheet for **RC212801**

### **BMP3 (NM\_001201) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	BMP3 (NM_001201) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BMP3
Synonyms:	BMP-3A
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>RC212801 representing NM\_001201  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCTGGGGCGAGCAGGCTGCTCTTTCTGTGGCTGGGCTGCTTCTGCGTGAGCCTGGCGCAGGGAGAGA  
 GACCGAAGCCACCTTTCCCGGAGCTCCGCAAAGCTGTGCCAGGTGACCGACGGCAGGTGGTGGCCGGA  
 CTCGAGCTGCAGCCGCAAGACAAGGTCTCTGAACACATGCTGCGGCTCTATGACAGGTACAGCACGGTC  
 CAGGCGGCCCGACACCGGGCTCCCTGGAGGGAGGCTCGCAGCCCTGGCGCCCTCGGCTCTGCGGAAG  
 GCAACACGGTTCGCAGCTTTCCGGCGGCAGCAGCAGAACTCTTGAAAGAAAAGGACTGTATATCTTCAA  
 TCTGACATCGCTAACCAAGTCTGAAAACATTTGTCTGCCACACTGTATTTCTGTATTGGAGAGCTAGGA  
 AACATCAGCCTGAGTTGCCAGTGTCTGGAGGATGCTCCCATCATGCTCAGAGGAAACACATTAGATTG  
 ATCTTTCTGCATGGACCCTCAAATTCAGCAGAAACCAAAGTCAACTCCTTGCCATCTGTCAGTGGATAT  
 GGCCAAATCTCATCGAGATATTATGCTCCTGGCTGTCTAAAGATATCACTCAATTCTTGAGGAAGGCCAAA  
 GAAAATGAAGAGTTCTCATAGGATTTAACATTACGTCCAAGGGACGCCAGCTGCCAAAGAGGAGGTTAC  
 CTTTTCCAGAGCCTTATATCTTGGTATATGCCAATGATGCCGCCATTTCTGAGCCAGAAAGTGTGGTATC  
 AAGCTTACAGGGACACCGGAATTTCCCACTGGAAGTGTCCCAATGGGATAGCCACATCAGAGCTGCC  
 CTTTCCATTGAGCGGAGGAAGAAGCGCTCTACTGGGGTCTTGCTGCCTCTGCAGAACAACGAGCTTCTG  
 GGGCAGAATACAGTATAAAAAGGATGAGGTGTGGGAGGAGAGAAAGCCTTACAAGACCTTCAGGCTCA  
 GGCCCTGAAAAGAGTAAGAATAAAAAGAAACAGAGAAAGGGCCTCATCGGAAGAGCCAGACGCTCCAA  
 TTTGATGAGCAGACCCTGAAAAGGCAAGGAGAAAGCAGTGGATTGAACCTCGGAATTGCGCCAGGAGAT  
 ACCTCAAGGTAGACTTTGCAGATATTGGCTGGAGTGAATGGATTATCTCCCCAAGTCTTTGATGCCTA  
 TTATTGCTCTGGAGCATGCCAGTCCCATGCCAAAGTCTTTGAAGCCATCAAATCATGCTACCATCCAG  
 AGTATAGTGAGAGCTGTGGGGTCTGTTCTGGGATTCTGAGCCTTGTGTGTACCAGAAAAGATGCTCT  
 CACTCAGTATTTTATTCTTTGATGAAAATAAGAATGTAGTGCTTAAAGTATACCCTAACATGACAGTAGA  
 GTCTTGGCCTTGACA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC212801 representing NM\_001201  
 Red=Cloning site Green=Tags(s)

MAGASRLLFLWLGCFCVSLAQGERPKPPFPELRKAVPGDRTAGGGPDSELQPQDKVSEHMLRLYDRYSTV  
 QAARTPGSLEGGSQPWRPRLREGNTVRSFRAAAAETLERKGLYIFNL TSLTKSENILSATLYFCIGELG  
 NISLSCPVSGGCSHHAQRKHIQIDL SAWTLKFSRNQSLLGHL SVDMAKSHRDIMSWL SKDITQFLRKAK  
 ENEEFLIGFNITSKGRQLPKRRLPFPEPYILVYANDAAISEPESVVSSLQGHRNFPTGTVPKWDHIRAA  
 LSIERRKKRSTGVLLPLQNNELPGAIEYQYKKDEVWEERKPYKTLQAQAPEKSKNKKKQRKGPHRKSQTLQ  
 FDEQTLKKARRKQWIEPRNCARRYLKVDFADIGWSEWII SPKSFDAYYCSGACQFPMPKSLKPSNHATIQ  
 SIVRAVGVPPIPEPCCVPEKMSSLILFFDENKNVVLKVPYPMNTVESACR

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6115\\_c11.zip](https://cdn.origene.com/chromatograms/mk6115_c11.zip)

**Restriction Sites:**

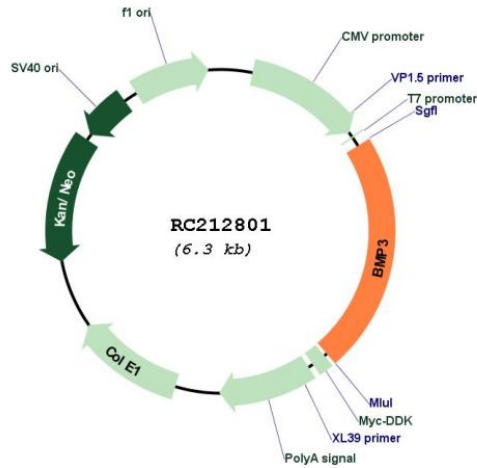
Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_001201

**ORF Size:** 1416 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_001201.4](#)

**RefSeq Size:** 1774 bp

**RefSeq ORF:** 1419 bp

**Locus ID:** 651

**UniProt ID:** [P12645](#)

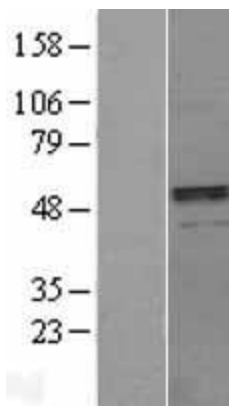
**Cytogenetics:** 4q21.21

**Protein Families:** Druggable Genome, Secreted Protein

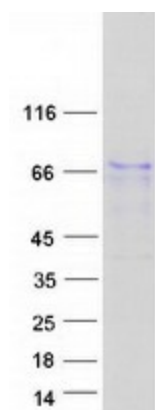
**MW:** 53.41 kDa

**Gene Summary:** 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. This protein suppresses osteoblast differentiation, and negatively regulates bone density, by modulating TGF-beta receptor availability to other ligands. [provided by RefSeq, Jul 2016]

### Product images:



Western blot validation of overexpression lysate (Cat# [LY400482]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212801 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified BMP3 protein (Cat# [TP312801]). The protein was produced from HEK293T cells transfected with BMP3 cDNA clone (Cat# RC212801) using MegaTran 2.0 (Cat# [TT210002]).