

## Product datasheet for **MG223213**

### **Bmp3 (NM\_173404) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Bmp3 (NM_173404) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Bmp3
Synonyms:	9530029I04Rik; D630004D15R
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG223213 representing NM\_173404  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCGGGGCGCGGGGCTGCTGTCTATGGCTAGGTTACTTCTGCCTGAACCTGGCACAGGGACAGA  
 GACCAAACCTTGACCTCCCGGGACTCCGTGAGACTGAGCCAAGCGACCGCGGACAGGTGGTAGCCGAG  
 TCCGGACCTGAGGCCGACGACAAGGTGTCGGAGCATATGCTGTGGCTCTATGACAGGTACAGCGGCAGC  
 AGTAGAGTCCAGGCTACCCGGACACCGGGCTCGCAGCTCCCGGGTCTCAGCCCCGCGCGGTGGTAAACA  
 CGGTCCGAGCTTCAGAGCCGACCGCAGGAACCTCTCAAACGAAGGGTTACACACCTTCAATCTGAC  
 TTCTCTAACCAAGTCGGAGAACATTTTGTGAGCCACACTGTATTTCTACGTTGGAGAATTAGTGAACATC  
 AGCTTGAGCTGTCCAGAACCCCAAGGATGCTCCCATCACACTCAGAGACAACACATCCAGATAGACCTCT  
 CTGCATGGATCTCAAATCCAACCAAAGCCAGCTCTTGGGTCTGTCTGTAGATGTGGTCAGACCTTA  
 TAGAGACAGCGTGTCTTGGCTGTCAAAGACATCACTCAGCTCTTAAGAAAGGCCAAGCAAATGAAGAG  
 TTTCTCATAGGGTTAAACATTACCTCCAGAGCACACGAGCTACCCAAGAGGATGCTGTTTTTCCCGAAC  
 CTTATATCTTGGTATACGCCAACGATGCTGCCATTTCTGAGCCAGAAAGCGTGGTATCCAGCTTACAGAG  
 ACACCGAGATTTACAGCGGGAAGTGGGCCAGACTGGATAGCCACGTCAGAGAAGCCCTCTCGTTGAG  
 AGGAGGAAGAAGCGCTCTACTGGGATCTTGTGCCCTTGAGAACAATGAGCTACCTGGGGCAGAGTATC  
 AGTACAAGGAGGAGGGAGCGTGGGAGGAGAGAAAGCCTTATAAGAGCCTTCAGACTCAGCCCCCTGAGAA  
 GAGTAGGAACAAAAGAAACAGAGGAAAGGGTCCCATCAGAAGGGACAGACGCTGCAATTTGATGAGCAG  
 ACCCTGAAGAAGCAAGGCGAAAGCAGTGGTTCGAACCTCGAACTGTCCAGGAGGTACCTTAAAGTGG  
 ACTTTGCTGATATCGGCTGGAGCGAATGGATTATCTCTCCAAGTCATTTGATGCTTTCTACTGCTCTGG  
 AGCCTGCCAGTTCCCATGCCAAAGTCTTTGAAACCATCAAATCACGCCACCATCCAGAGCATAGTGCGA  
 GCGGTGGGGTCTCTCCGGATTCCCGAGCCTTGTGTGTGCCGAAAAGATGTCCTCACTCAGCATCT  
 TGTCTTTGATGAAAACAAGAATGTAGTCTCAAAGTCTACCCTAACATGACAGTCGACTCCTGTGCTTG  
 TAGA

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

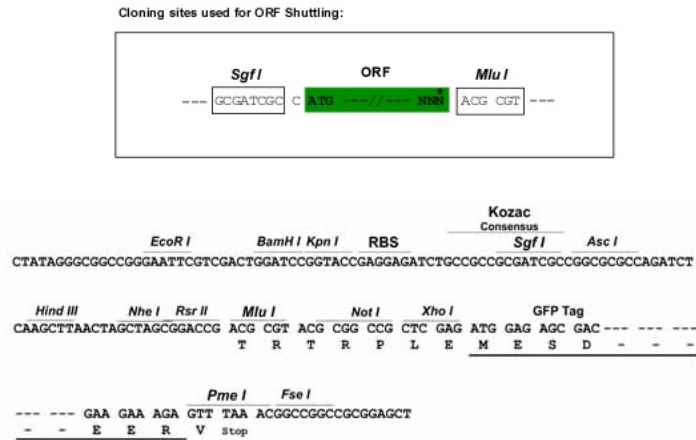
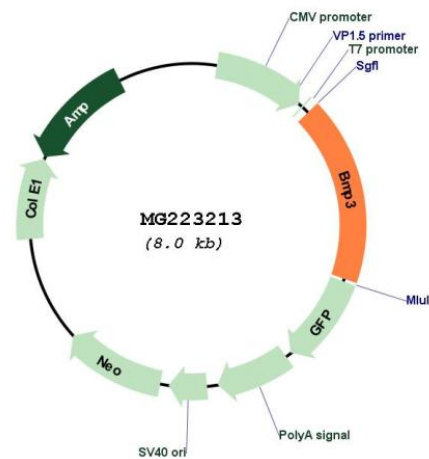
>MG223213 representing NM\_173404  
 Red=Cloning site Green=Tags(s)

MAGARGLLCLWLGYFCLNLAQQQRPNLHLPGLRETEPSDRATGGSPSPDLRPHDKVSEHMLWL YDRYSGS  
 SRVQATRTPGSQPLPGPQPLRGGNTVRSFRAAAAGTPQTKGLHTFNLTSLTKSENILSATLYFYVVGELVNI  
 SLSCPEPQGC SHHTQRQHIQIDL SAWILKSNQSQLLGHL SVDVVRPYRDSVSWLSKDITQLLRKAKQNEE  
 FLIGFNITSRAHELPRKMLFFPEPYILVYANDAAI SEPEVSVSSLQRHRDFTAGTGPRLD SHVREALSVE  
 RRRKRSTGILLPLQNNELPGA EYQYKEEGAW EERKPYKSLQTQPPEKSRNKKKQRKGSHQKQTLQFDEQ  
 TLKKARRKQWVEPRNCARRY LKVDFADIGWSEWII SPKSFDAFYCSGACQFPMPKSLKPSNHATIQSIVR  
 AVGVVSGIPECCVPEKMSSLSILFFDENKNVVLKVYPNMTVDSCACR

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

**Plasmid Map:**


**ACCN:** NM\_173404

**ORF Size:** 1404 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\\_173404.5](#), [NP\\_775580.1](#)

**RefSeq Size:** 3112 bp

**RefSeq ORF:** 1407 bp

**Locus ID:** 110075

**UniProt ID:** [Q8BHE5](#)

**Cytogenetics:** 5 48.24 cM

**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. Homozygous knockout mice for this gene exhibit increased bone density and volume, while overexpression of this gene in a transgenic mouse causes bone defects resulting in spontaneous rib fractures. This gene encodes distinct protein isoforms that may be similarly proteolytically processed. [provided by RefSeq, Jul 2016]