

## Product datasheet for RC214586

### BMP2 (NM\_001200) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	BMP2 (NM_001200) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BMP2
Synonyms:	BDA2; BMP2A; SSFSC; SSFSC1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC214586 representing NM_001200 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGTGGCCGGGACCCGCTGTCTTCTAGCGTTGCTGCTCCCCAGGTCTCCTGGGCGGCGGGCTGGCC  
TCGTTCCGGAGCTGGGCCGAGGAAGTTCGCGGCGGCGTCTCGGGCCGCCCTCATCCCAGCCCTCTGA  
CGAGGTCCTGAGCGAGTTCGAGTTGCGGCTGCTCAGCATGTTCCGGCTGAAACAGAGACCCACCCAGC  
AGGGACCCGTTGGTGCCTTACATGCTAGACCTGTATCGCAGGCACTCGGGTCAGCCGGGCTCACCCG  
CCCCAGACCACCGTTGGAGAGGGCAGCCAGCCGAGCCAACACTGTGCGCAGCTTCCACCATGAAGAATC  
TTTGGAAGAACTACCAGAAACGAGTGGGAAAACAACCCGGAGATTCTTCTTTAATTTAAGTTCTATCCCC  
ACGGAGGAGTTTATCACCTCAGCAGAGCTTCAAGTTTTCCGAGAACAGATGCAAGATGCTTTAGGAAACA  
ATAGCAGTTTCCATCACCGAATTAATTTTATGAAATCATAAAACCTGCAACAGCCAACCTCGAAATTC  
CGTGACCAGTCTTTTGGACACCAGGTTGGTGAATCAGAAATGCAAGCAGGTGGGAAAGTTTGTATGTCACC  
CCCCTGTGATGCGGTGGACTGCACAGGGACACGCCAACCATGGATTCTGGTGGAAAGTGGCCACTTGG  
AGGAGAAACAAGGTGTCTCCAAGAGACATGTTAGGATAAGCAGGTCTTTCACCAAGATGAACACAGCTG  
GTCACAGATAAGGCCATTGTAGTAACCTTTGGCCATGATGAAAAGGGCATCTCTCCAAAAAGAGAA  
AAACGTCAAGCCAAACACAAACAGCGGAAACGCCTTAAGTCCAGCTGTAAGAGACACCCCTTGTACGTGG  
ACTTCAGTGACGTGGGGTGGAAATGACTGGATTGTGGCTCCCCGGGTATCACGCCTTTTACTGCCACGG  
AGAATGCCCTTTTCTCTGGCTGATCATCTGAACTCCACTAATCATGCCATTGTTGAGACGTTGGTCAAC  
TCTGTTAACTCTAAGATTCTAAGGCATGCTGTGTCCGACAGAACTCAGTGCTATCTCGATGCTGTACC  
TTGACGAGAATGAAAAGTTGTATTAAGAAGTATCAGGACATGGTTGTGGAGGTTGTGGGTGTCCG

**ACGGT**ACGGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC214586 representing NM\_001200  
Red=Cloning site Green=Tags(s)

MVAGTRCLLALLLPQVLLGGAAGLVPELGRRKFAAASSGRPSSQPSDEVLSEFELRLLSMFGLKQRPTPS  
 RDAVVPPYMLDL YRRHSGQPGSPADHRLERAASRANTVRSFHHEESLEELPETS GKTTRRFFNLS SIP  
 TEEFITS AELQVFREQMDALGNNSSFHHRINIYEI IKPATANSKFPVTSLLDTRLVNQNASRWESFDVT  
 PAVMRWTAQGHANHG FVVEVAHLEEKQGVSKRHVRI SRSLHQDEHSWSQIRPLL VTFGHDGKGHPLHKRE  
 KRQAKHKQRKRLKSSCKRHPLYVDFSDVGWNDWIVAPPGYHAFYCHGECFPPLADHLNSTNHAI VQTLVN  
 SVNSKIPKACCVPTELSAISMLYLDENEKVVLKNYQDMVVEGCGCR

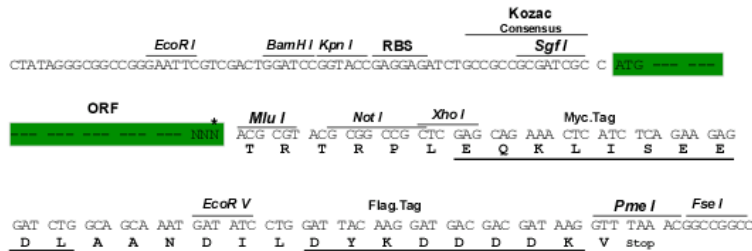
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6161\\_e12.zip](https://cdn.origene.com/chromatograms/mk6161_e12.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_001200

**ORF Size:** 1188 bp

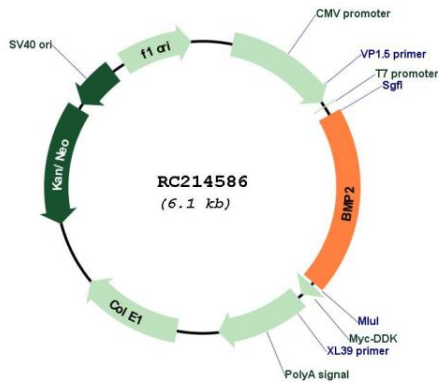
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

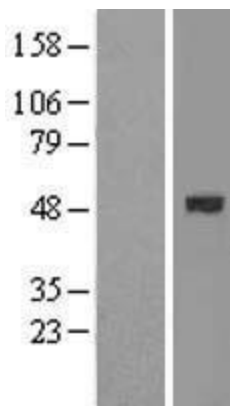
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_001200.4</a>
<b>RefSeq Size:</b>	1547 bp
<b>RefSeq ORF:</b>	1191 bp
<b>Locus ID:</b>	650
<b>UniProt ID:</b>	<a href="#">P12643</a>
<b>Cytogenetics:</b>	20p12.3
<b>Domains:</b>	TGFb_propeptide, TGF-beta
<b>Protein Families:</b>	Adult stem cells, Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Induced pluripotent stem cells, Secreted Protein, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transmembrane
<b>Protein Pathways:</b>	Acute myeloid leukemia, Basal cell carcinoma, Cytokine-cytokine receptor interaction, Endocytosis, Hedgehog signaling pathway, Hematopoietic cell lineage, Melanogenesis, Pathways in cancer, TGF-beta signaling pathway
<b>MW:</b>	44.63 kDa
<b>Gene Summary:</b>	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. [provided by RefSeq, Jul 2016]

Product images:



Circular map for RC214586



Western blot validation of overexpression lysate (Cat# [LY400481]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214586 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).