

## Product datasheet for **RG212307**

### **BMP6 (NM\_001718) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	BMP6 (NM_001718) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	BMP6
Synonyms:	VGR; VGR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG212307 representing NM\_001718  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCCGGGGCTGGGGCGGAGGGCGCAGTGGCTGTGCTGGTGGTGGGGCTGCTGTGCAGCTGCTGCGGGC  
 CCCCGCCGCTGCGGCCGCCCTTGCCCGCTGCCCGGCCGCCGCCCGGGGGCAGCTGCTGGGGACGG  
 CGGGAGCCCCGGCCGACGGAGCAGCCGCCCGCTCGCCGAGTCTCCTCGGGTTCCTGTACCGCGG  
 CTCAAGACGCAGGAGAAGCGGGAGATGCAGAAGGAGATCTTGTGGTGGTGGGGCTCCCGCACCGGCCCC  
 GGCCCTGCACGGCCTCCAACAGCCGACGCCCCGGCGCTCCGGCAGCAGGAGGAGCAGCAGCAGCAGCA  
 GCAGCTGCCTCGCGGAGAGCCCCCTCCCGGGCAGTGAAGTCCGCGCCCCCTTTCATGCTGGATCTGTAC  
 AACGCCCTGTCCGCCACAACGACGAGGACGGGGCGTCCGAGGGGAGAGGCAGCAGTCTGGCCCCACG  
 AAGCAGCCAGCTCGTCCAGCGTCCGACGCCGCCCGGGCGCCGCGCACCCGCTCAACCGCAAGAGCCT  
 TCTGGCCCCGGATCTGGCAGCGCGGCGCGTCCCCTACTGACAGCGCGCAGGACAGCGCCTTCTCAAC  
 GACCGGACATGGTCATGAGCTTTGTGAACCTGGTGGAGTACGACAAGGATTCTCCCCTCGTCAGCGAC  
 ACCACAAAGAGTTCAAGTTCAACTTATCCAGATTCTGAGGGTGGTGGTGGTGGTGGTGGTGGTGGTGGT  
 CATCTACAAGGACTGTGTATGGGGAGTTTTAAAACAAACTTTTCTTATCAGCATTTATCAAGTCTTA  
 CAGGAGCATCAGCACAGAGACTCTGACCTGTTTTTGTGGACACCCGTGTAGTATGGGCCTCAGAAGAAG  
 GCTGGCTGGAATTTGACATCACGGCCACTAGCAATCTGTGGTGTGACTCCACAGCATAACATGGGGCT  
 TCAGCTGAGCGTGGTACAAGGGATGGAGTCCACGTCCACCCCGAGCCGAGGCCTGGTGGCAGAGAC  
 GGCCCTTACGATAAGCAGCCCTTCATGGTGGCTTTCTTCAAAGTGAAGTGGTCCACGTGCGCACCACCA  
 GTTCAGCTCCAGCCGGCGCCGACAACAGAGTGTAAATCGCTTACCCAGTCCAGGAGTGGCGCGGGT  
 CTCAGTCTTACAGATTACAACAGCAGTGAATTGAAAACAGCCTGCAGGAAGCATGAGCTGTATGTGAGT  
 TTCAAAGACTGGGATGGCAGGACTGGATCATTGCACCCAAGGGCTATGCTGCCAATTACTGTGATGGAG  
 AATGCTCCTTCCCACTCAACGCACACATGAATGCAACCAACCACGCGATTGTGCAGACCTTGGTTACCT  
 TATGAACCCCGAGTATGTCCCAAAACCGTGTGTGCGCAACTAAGCTAAATGCCATCTCGGTTCTTTAC  
 TTTGATGACAACCAATGTCATTCTGAAAAAATACAGGAATATGGTTGTAAGAGCTTGTGGATGCCAC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>RG212307 representing NM\_001718  
 Red=Cloning site Green=Tags(s)

MPGLGRRQWLCWWWGLLCSCCGPPPLRPPLAAAAAAGQLLGDGSPGRTEQPPSPQSSSGFLYRR  
 LKTQEKREMQEILSVLGLPHRPRPLHGLQQPQPALRQQEEQQQQQLPRGEPPLGRLKSAPLFMLDL  
 NAL SADNDEGASEGERQQSWPHEAASSQRRQPPPGAHPLNRKSLAPGSGSGGASPLTSAQDSAFLN  
 DADMVMSFVNLVEYDKEFSRQRHHEKFFNLSQIPEGEVVTAEFRIYKDCVMGSFKNQTLISIQVL  
 QEHQHRSDLFLLDTRVVWASEEGWLEFDITATSNLWVTPQHNMGLQLSVVTRDGVVHPRAAGLVGRD  
 GPYDKQPFMVAFFKVSEVHVRTRSASSRRRQSRNRSTQSQDVARVSSASDYNSELKTAACRKHLYVS  
 FQDLGWQDWIIAPKGYAANYCDGECFPLNAHMNATNHAIVQTLVHLMNPEYVVKPCCAPTKLNAISVLY  
 FDDNSNVILKKYRNMVVRACGCH

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Kozac  
Consensus

EcoRI BamHI KpnI RBS SgfI AscI

CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGGCCAGATCT

HindIII NheI RsrII MluI NotI XhoI GFP Tag

CAAGCTTAACTAGCTAGCGGACCG ACG CGT ACG CCG CCG CTC GAG ATG GAG AGC GAC --- --- ---

T R T R P L E M E S D - - -

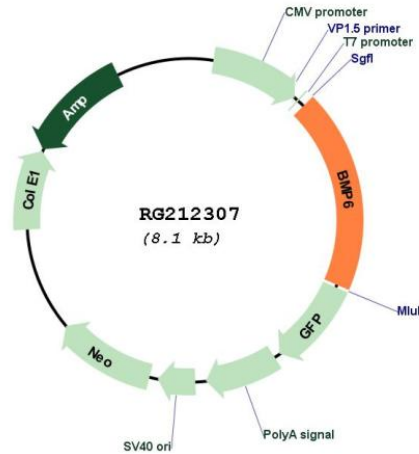
  

PmeI FseI

--- --- GAA GAA AGA GTT TAA ACGGCCGGCCGGGAGCT

- - - E E R V Stop

**Plasmid Map:**



**ACCN:** NM\_001718

**ORF Size:** 1539 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>RefSeq:</b>	<a href="#">NM_001718.2</a> , <a href="#">NP_001709.1</a>
<b>RefSeq Size:</b>	2943 bp
<b>RefSeq ORF:</b>	1542 bp
<b>Locus ID:</b>	654
<b>UniProt ID:</b>	<a href="#">P22004</a>
<b>Cytogenetics:</b>	6p24.3
<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
<b>Protein Pathways:</b>	Hedgehog signaling pathway, TGF-beta signaling pathway
<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. This protein regulates a wide range of biological processes including iron homeostasis, fat and bone development, and ovulation. Differential expression of this gene may be associated with progression of breast and prostate cancer. Mutations in this gene may be associated with iron overload in human patients. [provided by RefSeq, Jul 2016]