

Product datasheet for **RC203813**

BMP7 (NM_001719) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BMP7 (NM_001719) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BMP7
Synonyms:	OP-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC203813 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCACGTGCGCTCACTGCGAGCTGCGGCGCCGACAGCTTCGTGGCGCTCTGGGCACCCCTGTTCTCTGC
 TGCCTCCGCCCTGGCCGACTTCAGCCTGGACAACGAGGTGCACTCGAGCTTCATCCACCGCGCCTCCG
 CAGCCAGGAGCGGCGGGAGATGCAGCGGAGATCCTCTCATTGTTGGCTTGCCCAACCGCCGCGCCCG
 CACCTCCAGGGCAAGCACAACCTCGGCACCCATGTTTCATGCTGGACCTGTACAACGCCATGGCGGTGGAGG
 AGGGCGGCGGCCCGGCGCCAGGGCTTCTCTACCCCTACAAGGCCGTCTTCAGTACCCAGGGCCCCC
 TCTGGCCAGCCTGCAAGATAGCCATTTCTCACCGACGCCGACATGGTCATGAGCTTCGTC AACCTCGTG
 GAACATGACAAGGAATTTCCACCCACGCTACCACCTCGAGAGTTCGGTTTGATCTTCCAAGATCC
 CAGAAGGGGAAGCTGTCACGGCAGCCGAATTCGGATCTACAAGGACTACATCCGGGAACGCTTCGACAA
 TGAGACGTTCCGGATCAGCGTTTATCAGGTGCTCCAGGAGCACTTGGGCAGGGAATCGGATCTTCTCTG
 CTCGACAGCCGTACCCTCTGGGCCCTCGGAGGAGGGCTGGCTGGTGTGATCATCACGCCACCGCAACC
 ACTGGGTGGTCAATCCGCGGCACAACCTGGGCCTGCAGCTCTCGGTGGAGACGCTGGATGGGCAGAGCAT
 CAACCCCAAGTTGGCGGGCTGATTGGCGGCACGGGCCCCAGAACAAGCAGCCCTTCATGGTGGCTTTC
 TTCAAGGCCACGGAGGTCCACTTCCGCAGCATCCGGTCCACGGGGAGCAAACAGCGCAGCCAGAACCCT
 CCAAGACGCCCAAGAACCAGGAAGCCCTGCGGATGGCCAACTGGCAGAGAACAGCAGCAGCGACCAGAG
 GCAGGCCTGTAGAAGCACGAGCTGTATGTCAGCTTCCGAGACCTGGGCTGGCAGGACTGGATCATCGCG
 CCTGAAGGCTACGCCCTACTACTGTGAGGGGGAGTGTGCCTTCCCTCTGAACCTCTACATGAACGCCA
 CCAACCCAGCCATCGTGCAGACGCTGGTCCACTTCATCAACCCGAAACGGTGCCCAAGCCCTGCTGTGC
 GCCACGCAGCTCAATGCCATCTCCGTCTACTTCGATGACAGCTCCAACGTCATCTGAAGAAATAC
 AGAAACATGGTGGTCCGGCCTGTGGCTGCCAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC203813 protein sequence
 Red=Cloning site Green=Tags(s)

MHVRSLRAAAPHSFVALWAPLFLLRSALADFLDNEVHSSFIHRRLRSQERREMQRILSILGLPHRPRP
 HLQGKHNSAPMFLDLNAMAVEEGGPGGQGSYPYKAVFSTQGPPLASLQDSHFLTADMMVMSFVNLV
 EHDKEFFHPRYHHRFRFDLSKIPEGEAVTAAEFRIYKDYIRERFDNETFRISVYQVLQEHLGRESDFL
 LDSRTLWASEEGLVFDITATSNHWVNPVPRHNLGLQLSVETLDGQSINPKLAGLIGRHGPQNKQPFMVA
 FKATEVHFRSIRSTGSKQRSQNRSKTPKNQEALRMANVAENSSDQRQACKKHELIVSFRDLGWQDWIIA
 PEGYAAAYCEGECAPLNSYMNATNHAIVQTLVHFINPETVPKPCAPTQLNAISVLYFDDSSNVILKKY
 RNMVVRACGCH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6134_b02.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001719

ORF Size: 1293 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

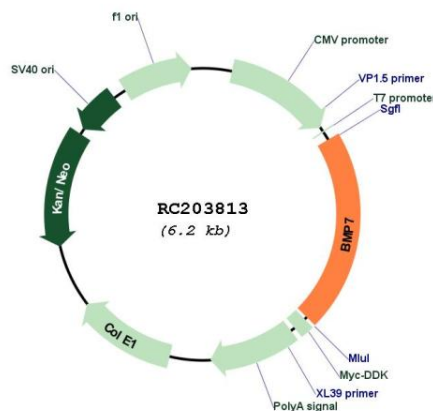
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

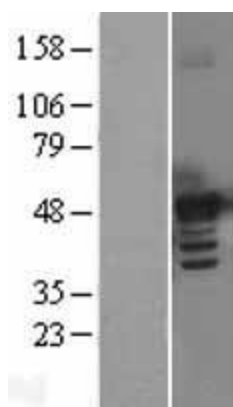
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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.

Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	<u>NM_001719.3</u>
RefSeq Size:	4049 bp
RefSeq ORF:	1296 bp
Locus ID:	655
UniProt ID:	<u>P18075</u>
Cytogenetics:	20q13.31
Domains:	TGFb_propeptide, TGF-beta
Protein Families:	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
Protein Pathways:	Cytokine-cytokine receptor interaction, Hedgehog signaling pathway, TGF-beta signaling pathway
MW:	49.3 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, which plays a role in bone, kidney and brown adipose tissue development. Additionally, this protein induces ectopic bone formation and may promote fracture healing in human patients. [provided by RefSeq, Jul 2016]

Product images:



Circular map for RC203813



Western blot validation of overexpression lysate (Cat# [LY400647]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203813 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).