

Product datasheet for **RC206456**

BMP5 (NM_021073) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BMP5 (NM_021073) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BMP5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC206456 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCATCTGACTGTATTTTTACTTAAGGGTATTGTGGTTTCTCTGGAGCTGCTGGTTCTAGTGGTT
 ATGCAAAAAGGAGTTTGGGAGACAATCATGTTCACTCCAGTTTTATTTATAGAAGACTACGGAACACGA
 AAGACGGGAAATACAAAGGGAAATTCTCTCTATCTTGGTTTGCCTCACAGACCCAGACATTTTACCT
 GGAAAACAAGCGTCTCTGCACCTCTTTATGCTGGTCTCTACAATGCCATGACCAATGAAGAAAATC
 CTGAAGAGTCCGAGTACTCAGTAAGGGCATCCTTGGCAGAAGAGACCAGAGGGGCAAGAAAGGGATACCC
 AGCCTCTCCCAATGGGTATCCTCGTCGCATACAGTTATCTCGGACGACTCCTCTGACCACCAGAGTCTCT
 CCTCTAGCCAGCCTCCATGATACCAACTTTCTGAATGATGCTGACATGGTCATGAGCTTTGTCAACTTAG
 TTGAAAGAGACAAGGATTTTTCTACCAGCGAAGGCATTACAAAGAATTCGATTTGATCTTACCCAAAT
 TCCTCATGGAGAGCAGTGACAGCAGCTGAATTCGGATATACAAGGACCGGAGCAACAACCGATTTGAA
 AATGAAACAATTAAGATTAGCATATATCAAATCATCAAGGAATACACAAATAGGGATGCAGATCTGTCT
 TGTTAGACACAAGAAAGGCCAAGCTTTAGATGTGGGTTGGCTTGTCTTTGATATCACTGTGACCAGCAA
 TCATTGGGTGATTAATCCCCAGAATAATTTGGGCTTACAGCTCTGTGCAGAAAACAGGGGATGGACGCAGT
 ATCAACGTA AAAATCTGCTGGTCTTGTGGGAAGACAGGGACCTCAGTCAAAAACAACCATTCATGGTGGCCT
 TCTTCAAGGCGAGTGAGTACTTCTTCGATCCGTGAGAGCAGCCAACAACGAAAAAATCAAACCGCAA
 TAAATCCAGCTCTCATCAGGACTCCTCCAGAATGTCCAGTGTGGAGATTATAACACAAGTGAGCAAAAA
 CAAGCCTGTAAGAAGCACGAACCTATGTGAGCTTCCGGATCTGGGATGGCAGGACTGGATTATAGCAC
 CAGAAGGATACGCTGCATTTTATTGTGATGGAGAATGTTCTTTTCCACTTAACGCCCATATGAATGCCAC
 CAACCAGCTATAGTTCAGACTCTGGTTTCTGATGTTTCTGACCACGTACCAAAGCCTTGTGTGCT
 CCAACCAATTAATGCCATCTCTGTTCTGACTTTGATGACAGCTCCAATGTCAATTTGAAAAATATA
 GAAATATGGTAGTACGCTCATGTGGCTGCCAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC206456 protein sequence
 Red=Cloning site Green=Tags(s)

MHLTVFLLKGI VFLWSCWLVGYAKGGLGDNHVHSSFIYRRLRNHERREIQREILSILGLPHRPRPFSP
 GKQASSAPLFMLDLYNAMTNEENPEESEYSVRASLAETR GARKGY PASPNGYPRRIQLSRTTPLTTQSP
 PLASLHDTNFLNDADMVMSFVNLVERDKDFSHQRRHYKEFRFDL TQIPHGEAVTAAEFRIYKDRSNNRFE
 NETIKISIIYQIIKEYTNRDADLFLDTRKAQALDVGWLVFDITVT SNHWVINPQNNLGLQLCAETGDGRS
 INVKSAGLVGRQPQSKQPFMVAFFKASEVLLRSVRAANKRKNQNRNKSSSHQDSSRMSSVGDYNTSEQK
 QACKKHELIVSFRDLGWQDWIIAPEGYAAFYCDGEC SFPLNAHMNATNHAI VQTLVHLMFPDHPKPCCA
 PTKLNAISVLVYFDDSSNVILKRYRNMVVRSCGCH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6197_c10.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_021073

ORF Size: 1362 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_021073.4](#)

RefSeq Size: 2207 bp

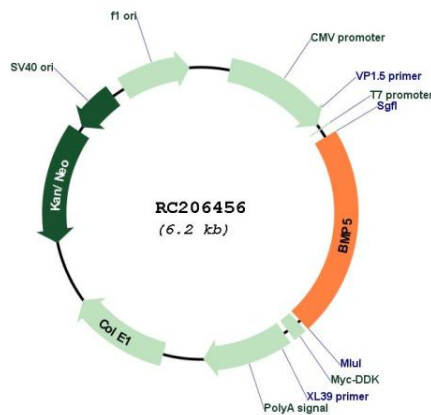
RefSeq ORF: 1365 bp

Locus ID: 653

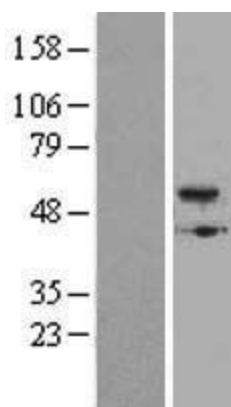
UniProt ID: [P22003](#)

Cytogenetics:	6p12.1
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:	Hedgehog signaling pathway, TGF-beta signaling pathway
MW:	51.7 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 and cartilage development. Polymorphisms in this gene may be associated with osteoarthritis in human patients. This gene is differentially regulated in multiple human cancers. This gene encodes distinct protein isoforms that may be similarly proteolytically processed. [provided by RefSeq, Jul 2016]

Product images:



Circular map for RC206456



Western blot validation of overexpression lysate (Cat# [LY402826]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206456 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).