

## Product datasheet for RC219979

### BMP4 (NM\_130850) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	BMP4 (NM_130850) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BMP4
Synonyms:	BMP2B; BMP2B1; MCOPS6; OFC11; ZYME
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC219979 representing NM_130850 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGATTCCTGGTAACCGAATGCTGATGGTCGTTTTATTATGCCAAGTCCTGCTAGGAGGCGGAGCCATG  
CTAGTTTGATACCTGAGACGGGAAGAAAAAGTCGCCGAGATTCAGGGCCACGCGGGAGGACGCCGCTC  
AGGGCAGAGCCATGAGCTCCTGCGGGACTTCGAGGCGACACTTCTGCAGATGTTTGGGCTGCGCCCGCC  
CCGCAGCCTAGCAAGAGTGCCGTCATTCGGACTACATGCGGGATCTTACC GGCTTCAGTCTGGGAGG  
AGGAGGAAGAGCAGATCCACAGCACTGGTCTTGAGTATCCTGAGCGCCCGCCAGCCGGCCAACACCGT  
GAGGAGCTTCCACCACGAAGAACATCTGGAGAACATCCCAGGGACCAGTAAAACTCTGCTTTTCGTTTC  
CTCTTTAACCTCAGCAGCATCCCTGAGAACGAGGCGATCTCCTCTGCAGAGCTTCGGCTCTTCCGGGAGC  
AGGTGGACCAGGGCCCTGATTGGGAAAGGGGCTTCCACCGTATAAACATTTATGAGGTTATGAAGCCCC  
AGCAGAAGTGGTGCCTGGGCACCTCATCACGCACTACTGGACACGAGACTGGTCCACCACAATGTGACA  
CGGTGGGAAACTTTTGATGTGAGCCCTGCGGTCTTTCGCTGGACCCGGGAGAAGCAGCCAAACTATGGGC  
TAGCCATTGAGGTGACTCACCTCCATCAGACTCGGACCCACCAGGGCCAGCATGTCAGGATTAGCCGATC  
GTTACCTCAAGGGAGTGGGAATTGGGCCAGCTCCGGCCCTCCTGGTCACCTTTGGCCATGATGGCCGG  
GGCCATGCCTTGACCCGACGCGGAGGCAAGCGTAGCCCTAAGCATCACTCACAGCGGGCCAGGAAGA  
AGAATAAGAACTGCCGGCGCACTCGCTCTATGTGGACTTCAGCGATGTGGCTGGAATGACTGGATTGT  
GGCCCCACCAGGCTACCAGGCTTCTACTGCCATGGGACTGCCCTTTCCTACTGGCTGACCACCTCAAC  
TCAACCAACCATGCCATTGTGCAGACCCTGGTCAATTCTGTCAATTCCAGTATCCCCAAAGCCTGTTGTG  
TGCCCACTGAACTGAGTGCCATCTCCATGCTGTACCTGGATGAGTATGATAAGGTGGTACTGAAAAATTA  
TCAGGAGATGGTAGTAGGGATGTGGGTGCCG

**ACGGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC219979 representing NM\_130850  
Red=Cloning site Green=Tags(s)

MIPGNRMLMVLLCQVLLGGASHASLIPETGKKKVAEIQGHAGGRRSGQSHELLRDFEATLLQMFLRRR  
 PQPSKSAVIPDYMRDL YRLQSGEEEEQIHSTGLEYPERPASRANTVRSFHHEEHLENIPGTSSENSAFRF  
 LFNLSSIPENEAISSAELRLFREQVDQGPDWERGFHRINIYEVMPKPAEVVPGHLITRLLDTRLVHHNVT  
 RWETFDVSPAVLRWTREKQPNYGLAIEVTHLHQTRTHQGQHVRI SRSLPQGSNGWAQLRPLLVTFGHDGR  
 GHALTRRRRAKRSPKHHSQRARKKNKNCRRHSLYVDFSDVGWNDWIVAPPGYQAFYCHGDCPFPLADHLN  
 STNHAIVQTLVNSVNSSIPKACCVPTELSAISMLYLDEYDKVVLKNYQEMVVEGCGCR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6116\\_e05.zip](https://cdn.origene.com/chromatograms/mk6116_e05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



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

**ACCN:** NM\_130850

**ORF Size:** 1224 bp

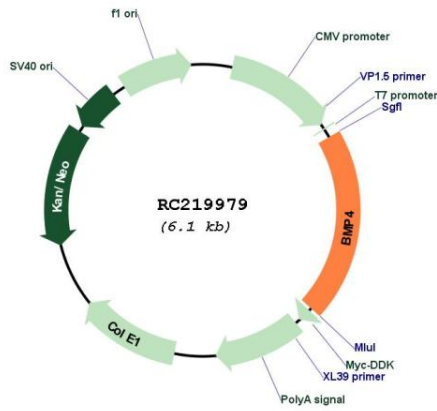
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone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

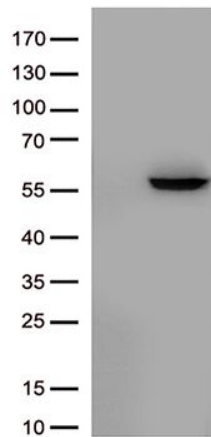
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<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_130850.1</a> , <a href="#">NP_570911.1</a>
<b>RefSeq Size:</b>	1790 bp
<b>RefSeq ORF:</b>	1227 bp
<b>Locus ID:</b>	652
<b>UniProt ID:</b>	<a href="#">P12644</a>
<b>Cytogenetics:</b>	14q22.2
<b>Protein Families:</b>	Adult stem cells, Cancer stem cells, Druggable Genome, Embryonic stem cells, Induced pluripotent stem cells, Secreted Protein, Stem cell relevant signaling - TGFb/BMP signaling pathway
<b>Protein Pathways:</b>	Basal cell carcinoma, Hedgehog signaling pathway, Pathways in cancer, TGF-beta signaling pathway
<b>MW:</b>	46.4 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. This protein regulates heart development and adipogenesis. Mutations in this gene are associated with orofacial cleft and microphthalmia in human patients. The encoded protein may also be involved in the pathology of multiple cardiovascular diseases and human cancers. [provided by RefSeq, Jul 2016]

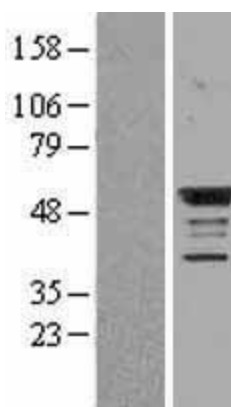
Product images:



Circular map for RC219979



HEK293T cells were transfected with the pCMV6-ENTRY control (left lane) or pCMV6-ENTRY BMP4 (Cat# RC219979, right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-BMP4. (Cat# [UM500038])



Western blot validation of overexpression lysate (Cat# [LY403337]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219979 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).