

## Product datasheet for **RG219979**

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

#### Product data:

Product Type:	Expression Plasmids
Product Name:	BMP4 (NM_130850) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	BMP4
Synonyms:	BMP2B; BMP2B1; MCOPS6; OFC11; ZYME
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG219979 representing NM_130850 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGATTCCTGGTAACCGAATGCTGATGGTCGTTTTATTATGCCAAGTCCTGCTAGGAGGCGCGAGCCATG  
CTAGTTTGATACCTGAGACGGGAAGAAAAAGTCGCCGAGATTCAGGGCCACGCGGGAGGACGCCGCTC  
AGGGCAGAGCCATGAGCTCCTGCGGGACTTCGAGGCGACACTTCTGCAGATGTTTGGGCTGCGCCCGCC  
CCGCAGCCTAGCAAGAGTGCCGTCATTCGGACTACATGCGGGATCTTTACCGGCTTCAGTCTGGGAGG  
AGGAGGAAGAGCAGATCCACAGCACTGGTCTTGAGTATCCTGAGCGCCCGCCAGCCGGCCAACACCGT  
GAGGAGCTTCCACCACGAAGAACATCTGGAGAACATCCCAGGGACCAGTAAAACTCTGCTTTTCGTTTC  
CTCTTTAACCTCAGCAGCATCCCTGAGAACGAGGCGATCTCCTCTGCAGAGCTTCGGCTCTTCCGGGAGC  
AGGTGGACCAGGGCCCTGATTGGGAAAGGGGCTTCCACCGTATAAACATTTATGAGGTTATGAAGCCCC  
AGCAGAAGTGGTGCCTGGGCACCTCATCACAGCACTACTGGACACGAGACTGGTCCACCACAATGTGACA  
CGGTGGGAAACTTTTGATGTGAGCCCTGCGGTCTTCGCTGGACCCGGGAGAAGCAGCCAAACTATGGGC  
TAGCCATTGAGGTGACTCACCTCCATCAGACTCGGACCCACCAGGGCCAGCATGTCAGGATTAGCCGATC  
GTTACCTCAAGGGAGTGGGAATTGGGCCAGCTCCGGCCCTCCTGGTCACCTTTGGCCATGATGGCCGG  
GGCCATGCCTTGACCCGACGCCGAGGGCCAAGCGTAGCCCTAAGCATCACTACAGCGGGCCAGGAAGA  
AGAATAAGAACTGCCGGCGCCACTCGCTCTATGTGGACTTCAGCGATGTGGCTGGAATGACTGGATTGT  
GGCCCCACCAGGCTACCAGGCCCTTCTACTGCCATGGGACTGCCCTTTCCACTGGCTGACCACCTCAAC  
TCAACCAACCATGCCATTGTGCAGACCCTGGTCAATTCTGTCAATTCCAGTATCCCCAAAGCCTGTTGTG  
TGCCCACTGAACTGAGTGCCATCTCCATGCTGTACCTGGATGAGTATGATAAGGTGGTACTGAAAAATTA  
TCAGGAGATGGTAGTAGAGGGATGTGGTGCCG

**ACCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG219979 representing NM\_130850  
 Red=Cloning site Green=Tags(s)

MIPGNRMLMVLLCQVLLGGASHASLIPETGKKKVAEIQGHAGGRRSGQSHELLRDFEATLLQMFGLRRR  
 PQPSKSAVIPDYMRDL YRLQSGEEEEEQIHSTGLEYPERPASRANTVRSFHHEEHLENIPGTSSENSAFRF  
 LFNLSSIPENEAISSAELRLFREQVDQGPDWERGFHRINIYEVMPKPAEVPVPHLITRLLDTRLVHHNVT  
 RWETF DVSPAVLRWTREKQPNYGLAIEVTHLHQTRTHQGQHVRI SRSLPQSGSNWAQLRPLLVTFGHDGR  
 GHALTRRRRAKRSPKHHSQRARKKNKNCRRHSLYVDFSDVGVNDWIVAPPGYQAFYCHGDCPFPLADHLN  
 STNHAI VQTLVNSVNSSIPKACCVPTELSAISMLYLDEYDKVVLKNYQEMVVEGCGCR

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_130850

**ORF Size:** 1224 bp

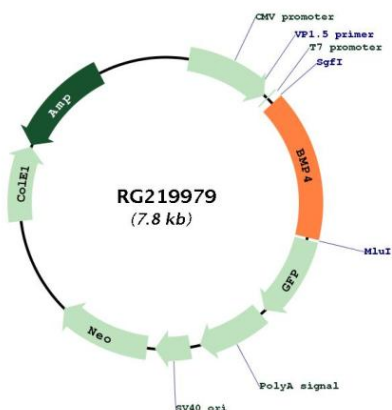
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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>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 RG219979