

Product datasheet for **RG214715**

GDF7 (NM_182828) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GDF7 (NM_182828) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GDF7
Synonyms:	BMP12
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG214715 representing NM_182828
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGACCTGAGCGCCGCCCGCTGTGCCTTTGGCTGTGAGCGCCTGCCGCCCGCGACGGGCTGG
 AAGCGGCCGCGTGTGCGAGCGCGGGGCTGGGCCGGTCCGGAGCCAGGGGGCGCGCGCGCGCG
 CGGCGCGGGCGGACTCTTGCCAGGCTGCGGGCGCCGCGGCTGTCCCGCCGCCCGGTTCCCGGGCC
 CGCGCCGCGCGCCGCGCGGGCTCCGGCTTCAGGAACGGCTCGGTGGTGCCGACCACTTCATGATGT
 CGCTTTACCGAGCCTGGCCGGGAGGGCTCCGGCCGGGGCAGCCGCTGTCTCCGCTCGGGCCATGGTGC
 CGCGGACACGATCACCGGCTTACAGACCAGGCGACCCAAGACGAATCGGCAGCCGAAACAGGCCAGAGC
 TTCCTGTTGACGTGTCCAGCCTAACGACGCAGACGAGGTGGTGGTGCCGAGCTGCGCGTGTGCGCC
 GGGGATCTCCAGAGTCGGGCCAGGCGACTTCTCCGCCGTTGCTGCTGTGTCACGTGCCCGGG
 CGCCGCCGAGCGCCACGCTGTACTCGCGGGCAGCTGAGCCCTAGTCGGTCAGCGCTGGGAGGGC
 TTGACGCTGGCGGACCCATGAGGCGCCACCGTGTGAACCGCGCCCCCGCGCGTTCGCTCTTGC
 TGC CGCAGTGGCAGGCCCGGTGCCGAGCCGTTGGCACTGCGCGGCTGGGCTTCGGCTGGCCGGCGG
 AGGGGGCTCTGCGGCAGAGGAGCGCGGCTGTAGTCTCTCTCCCGCACGCAGAGGAAAGAGACTTA
 TTCCGGGAGATCCGCGCCAGGCCCGCGGCTCGGGGCCGCTCTGGCCTCAGAGCCGCTGCCCGACCCAG
 GAACCGGCACCGCGTCCCAAGGCGAGTATTGGCGGCCGAGACGGAGGAGGACGGCGTTGGCCGGGAC
 GCGGACAGCGCAGGGCAGCGCGGGGGCGGGGCCGGGGCCAGGGCGCAGGGGCCGGAGCCGCTGCAGC
 CGCAAGCCGTTGACGTGGACTTCAAGGAGCTCGGCTGGGACGACTGGATCATCGCGCCGCTGGACTACG
 AGGCGTACCCTGCGAGGGCCTTTGCGACTTCCCTTTGCGTTTCGCACCTCGAGCCCAACCATGCCAT
 CATTGACAGCTGCTCAACTCCATGGCACCAGACGCGCGCCGCGCTCCTGCTGTGTGCCAGCGCGCCTC
 AGCCCCATCAGCATCCTCTACATCGACCGCCACAACGTTGTCTACAAGCAATACGAGGACATGGTGG
 TGGAGGCTCGGCTGCAGG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG214715 representing NM_182828
 Red=Cloning site Green=Tags(s)

MDLSAAAALCLWLLSACRPRDGLEAAAVLRAAGAGPVRSPPGGGGGGGGRTLAQAAGAAVPAAVPRA
 RAARRAAGSGFRNGSVVPHHFMMSLYRSLAGRAPAGAAVVSASGHGRADTITGFTDQATQDESAEETGQS
 FLFDVSSLNDADEVVGAELRVLRRGSPESGPGSWTSPLLLLLSTCPGAARAPRLLYSRAAEPLVQQRWEA
 FDVADAMRRHRREPRPPRAFCLLLRAVAGPVPSPLALRRLGFGWPGGGSAEERAVLVVSSRTQRKESL
 FREIRAQARALGAALASEPLPDPGTGTASPRAVIGGRRRRRTALAGTRTAQSGGGAGRGHRRGRSRCS
 RKPLHVDFKELGWDDWIIAPLDYEAHCEGLCDFPLRSHLEPTNHAI IQTLLNSMAPDAAPASCCVPARL
 SPISILYIDAANNVVYKQYEDMVVEACGCR

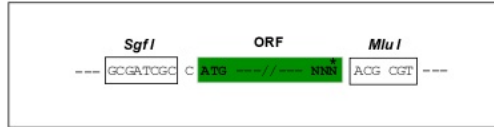
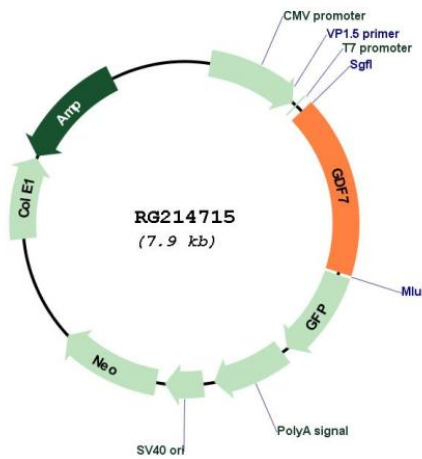
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:


Plasmid Map:

ACCN: NM_182828

ORF Size: 1350 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:	<ol style="list-style-type: none">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_182828.4
RefSeq Size:	1994 bp
RefSeq ORF:	1353 bp
Locus ID:	151449
UniProt ID:	Q7Z4P5
Cytogenetics:	2p24.1
Protein Families:	Adult stem cells, Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Secreted Protein, Stem cell relevant signaling - TGFb/BMP signaling pathway
Protein Pathways:	TGF-beta signaling pathway
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. This protein may play a role in the differentiation of tendon cells and spinal cord interneurons. A mutation in this gene may be associated with increased risk for Barrett's esophagus and esophageal adenocarcinoma. [provided by RefSeq, Sep 2016]