

Product datasheet for **RC207105**

GDF 5 (GDF5) (NM_000557) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GDF 5 (GDF5) (NM_000557) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GDF 5
Synonyms:	BDA1C; BMP-14; BMP14; CDMP1; DUPANS; LAP-4; LAP4; OS5; SYM1B; SYNS2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC207105 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAGACTCCCCAACTCCTCACTTTCTTGCTTTGGTACCTGGCTTGGCTGGACCTGGAATTCATCTGCA
 CTGTGTTGGGTGCCCTGACTTGGGCCAGAGACCCAGGGGACCAGGCCAGGATTGGCCAAAGCAGAGGC
 CAAGGAGAGGCCCCCCCTGGCCCGAACGTCCTCAGGCCAGGGGTACACGCTATGGTGGGGGGCCACC
 AATGCCAATGCCAGGGCAAAGGGAGGCACCGGGCAGACAGGAGGCCTGACACAGCCCAAGAAGGATGAAC
 CCAAAAAGCTGCCCCAGACCGGGCGGCCCTGAACCCAAGCCAGGACACCCTCCCCAAACAAGGCAGGC
 TACAGCCCGACTGTGACCCAAAAGGACAGCTTCCCGGAGGCAAGGCACCCCAAAAGCAGGATCTGTC
 CCCAGCTCCTTCTGCTGAAGAAGGCCAGGGAGCCCGGGCCCCACGAGAGCCCAAGGAGCCGTTTCGCC
 CACCCCATCACACCCACGAGTACATGCTCTCGCTGTACAGGACGCTGTCCGATGCTGACAGAAAGGG
 AGGCAACAGCAGCGTGAAGTTGGAGGCTGGCCTGGCCAACACCATCACCAGCTTTATTGACAAAGGGCAA
 GATGACCGAGGTCCTGGTTCAGGAAGCAGAGGTACGTGTTTACATTAGTGCCCTGGAGAAGGATGGGC
 TGCTGGGGGCGAGCTGCGGATCTTGCAGGAAGAAGCCCTCGGACACGGCAAGCCAGCGGCCCGGAGG
 CGGGCGGGCTGCCAGCTGAAGCTGTCCAGCTGCCCCAGCGGCCGCGCAGCCGGCCTCTTGTGATGTG
 CGCTCCGTGCCAGGCCTGGACGGATCTGGCTGGGAGGTGTTTCGACATCTGGAAGCTTCCGAAACTTTA
 AGAACTCGGCCAGCTGTGCCTGGAGCTGGAGGCTGGGAACGGGGCAGGGCCGTGGACCTCCGTGGCCT
 GGGCTTCGACCGCGCCCGCCGCGCAGGTCACGAGAAGGCCCTGTTCTGGTGTGGCCGCCAAGAAA
 CGGGACCTGTTCTTTAATGAGATTAAGGCCCGCTCTGGCCAGGACGATAAGACCGTGTATGAGTACCTGT
 TCAGCCAGCGCGAAAACGGCGGCCCCACTGGCACTCGCCAGGGCAAGCGACCCAGCAAGAACCTTAA
 GGCTCGCTGCAGTCGGAAGGCACATGCATGTCAACTTCAAGGACATGGGCTGGGACGACTGGATCATCGCA
 CCCCTTGAGTACGAGGCTTCCACTGCGAGGGCTGTGCGAGTTCCTTCCGCTCCACCTGGAGCCCA
 CGAATCATGCAGTCATCCAGACCCTGATGAACTCCATGGACCCGAGTCCACACCACCCCTGCTGTGT
 TCCACGCGGCTGAGTCCCATCAGCATCTCTTTCATTGACTCTGCCAACACGTGGTGTATAAGCAGTAT
 GAGGACATGGTCGTGGAGTCGTGTGGTGCAGG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC207105 protein sequence
 Red=Cloning site Green=Tags(s)

MRLPKLLTFLLWYLAWLDFEICTVLGAPDLGQRPOGTRPGLAKAEAKERPPLARNVFRPGGHSYGGGAT
 NANARAKGGTGQTGGLTQPKKDEPKKPPRPGGPEPKPGHPPQTRQATARTVTPKGQLPGGKAPPKAGSV
 PSSFLLKKAREPGPPREPKEPFRPPPITPHEYMLSLYRTLSDADRKGNSVVKLEAGLANTITSFIDKGQ
 DDRGPVVRKQRYVFDISALEKDGLLGAELRILRKKPSDTAKPAAPGGRAAQLKLSSCPSGRQPASLLDV
 RSVPLDGSWEVFDIWKLFNFKNSAQLCLELEAWERGRAVDLRGLGFDRAARQVHEKALFLVFGRTKK
 RDLFFNEIKARSGQDDKTYVEYLFSSRRKRRAPLATRQGRPSKNLKAARSRKALHVNFKDMGWDDWIIA
 PLEYEAFHCEGLCEPPLRSHLEPTNHAVIQTLMNSMDPESTPPTCCVPTLSPIISILFIDSANNVYKQY
 EDMVVESCGCR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6246_c04.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_000557

ORF Size: 1503 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_000557.5](#)

RefSeq Size: 2344 bp

RefSeq ORF: 1506 bp

Locus ID: 8200

UniProt ID: [P43026](#)

Cytogenetics: 20q11.22

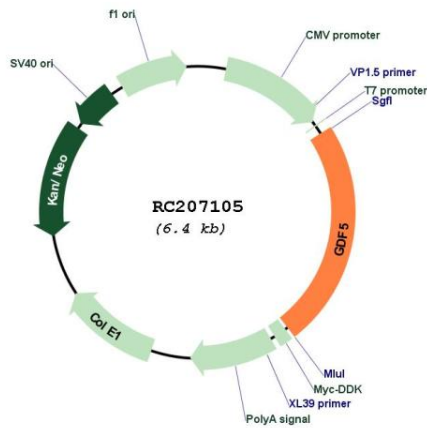
Protein Families: Adult stem cells, Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Secreted Protein, Stem cell relevant signaling - TGFb/BMP signaling pathway

Protein Pathways: Cytokine-cytokine receptor interaction, TGF-beta signaling pathway

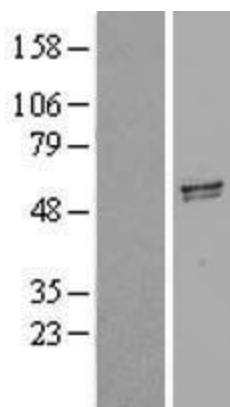
MW: 55.4 kDa

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. This protein regulates the development of numerous tissue and cell types, including cartilage, joints, brown fat, teeth, and the growth of neuronal axons and dendrites. Mutations in this gene are associated with acromesomelic dysplasia, brachydactyly, chondrodysplasia, multiple synostoses syndrome, proximal symphalangism, and susceptibility to osteoarthritis. [provided by RefSeq, Aug 2016]

Product images:



Circular map for RC207105



Western blot validation of overexpression lysate (Cat# [LY424647]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207105 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).