

Product datasheet for **SC125956**

GDF 5 (GDF5) (NM_000557) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GDF 5 (GDF5) (NM_000557) Human Untagged Clone
Tag:	Tag Free
Symbol:	GDF 5
Synonyms:	BDA1C; BMP-14; BMP14; CDMP1; DUPANS; LAP-4; LAP4; OS5; SYM1B; SYNS2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene sequence for NM_000557 edited
CGCTGCCACTGGTTAGCGATAATACTGGCAGCGCGACCGGTTTCTGAGGGTTGTTACCT
TGCTGCTCAGACGCTCCGAGAAGCTTCAGGCAGCATAACACTTACAGTAGAGACAGGGTT
TCACCATGTTAGCCAGGATGGTCTTGATCTCCTGACCTCGTGATCCACCTGCCTCGGCCCT
CCCAAGGTGCTGGGATTGCAGGCGTGAGCCACTGCGCCTGGCCGCAATTTACTTCATTGA
ATCTCCAACAAGAGTCTGTGAGCTGCTGACTGGAGACGGTGCACGTCTGGATACGAGAG
CATTTCCACTATGGGACTGGATACAAACACACACCCGGCAGACTTCAAGAGTCTCAGACT
GAGGAGAAAAGCCTTTCTTCTGCTGCTACTGCTGCTGCCGCTGCTTTTGAAGTCCACTC
CTTTCATGGTTTTTCTGCCAAACCAGAGGCACCTTTGCTGCTGCCGCTGTTCTCTTTGG
TGTCAATCAGCGGCTGGCCAGAGGATGAGACTCCCCAACTCCTCACTTTCTTGCTTTGG
TACCTGGCTTGGCTGGACCTGGAATTCATCTGCACTGTGTTGGGTGCCCTGACTTGGGC
CAGAGACCCAGGGGACCAGGCCAGGATTGGCCAAAGCAGAGGCCAAGGAGAGGCCCCCC
CTGGCCCCGAACGTCTCAGGCCAGGGGTACAGCTATGGTGGGGGGCCACCAATGCC
AATGCCAGGGCAAAGGGAGGCACCGGGCAGACAGGAGCCTGACACAGCCCAAGAAGGAT
GAACCCAAAAAGCTGCCCCAGACCGGGCGGCCCTGAACCCAAAGCCAGGACACCCTCCC
CAAACAAGGCAGGCTACAGCCCGACTGTGACCCAAAAGGACAGCTTCCCGGAGGCAAG
GCACCCCAAAAAGCAGGATCTGTCCCCAGCTCCTTCTGCTGAAGAAGGCCAGGGAGCCC
GGGCCCCACAGAGGCCAAGGAGCCGTTTCGCCACCCCCATCACACCCACGAGTAC
ATGCTCTCGTGTACAGGACGCTGTCCGATGCTGACAGAAAGGGAGGCAACAGCAGCGTG
AAGTTGGAGGCTGGCCTGGCCAACACCATCACCAGCTTTATTGACAAAGGGCAAGATGAC
CGAGGTCCCGTGGTCAGGAAGCAGAGGTACGTGTTGACATTAGTGCCCTGGAGAAGGAT
GGGCTGCTGGGGCCGAGCTGCGGATCTTGCGAAGAAGCCCTCGGACACGGCCAAGCCA
CGGGCCCCGGAGGCGGGCGGGTGCACAGCTGAAGCTGTCCAGCTGCCAGCGGCCGG
CAGCCCGCCTCCTTGCTGGATGTGCGCTCCGTGCCAGGCCTGGACGGATCTGGCTGGGAG
GTGTTGACATCTGGAAGCTCTCCGAACTTTAAGAACTCGGCCAGCTGTGCCTGGAG
CTGGAGGCTGGGAACGGGGCAGGGCCGTGGACCTCCGTGGCCTGGGCTTCGACCGCGCC
GCCCGGCAGGTCCACGAGAAGGCCCTGTTCTGGTGTGTTGGCCGACCAAGAAACGGGAC
CTGTTCTTAAATGAGATTAAGGCCGCTCTGGCCAGGACGATAAGACCGTGTATGAGTAC
CTGTTACGCCAGCGGCGAAAACGGCGGGCCCCACTGGCCACTCGCCAGGGCAAGCGACCC
AGCAAGAACCCTAAGGCTCGCTGCAGTCGGAAGGCACTGCATGTCAACTCAAGGACATG
GGCTGGGACGACTGGATCATCGACCCCTTGAGTACGAGGCTTCCACTGCGAGGGGCTG
TGCGAGTTCCCATTGCGCTCCCACCTGGAGCCACGAATCATGCAGTCATCCAGACCCTG
ATGAACTCCATGGACCCCGAGTCCACACCCACCTGCTGTGTTCCACGCGGGTGTGAGT
CCCATCAGCATCCTTTCATTGACTCTGCCAACACGTGGTGTATAAGCAGTATGAGGAC
ATGGTCGTGGAGTCGTGTGGCTGCAGGTAGCAGCACTGGCCCTCTGTCTTCTGGGTGGC
ACATCCCAAGAGCCCCTTCTGCACTCCTGGAATCACAGAGGGGTGAGGAAGCTGTGGCA
GGAGCATCTACACAGCTTGGGTGAAAGGGGATTCCAATAAGCTTGTCTGCTCTCTGAGTG
TGACTTGGGCTAAAGGCCCTTTTATCCACAAGTTCCCCTGGCTGAGGATTGCTGCCCG
TCTGCTGATGTGACCAGTGGCAGGCACAGGTCCAGGGAGACAGACTCTGAATGGGACTGA
GTCCCAGGAAACAGTGCTTTCCGATGAGACTCAGCCACCATTTCTCCTACCTGGGCCT
TCTCAGCCTCTGGACTCTCCTAAGCACCTCTCAGGAGAGCCACAGGTGCCACTGCCTCCT
CAAATCACATTTGTGCTGGTACTTCCCTGTCCCTGGGACAGTTGAGAAGCTGACTGGGC
AAGAGTGGGAGAGAAGAGGAGAGGGCTTGGATAGAGTTGAGGAGTGTGAGGCTGTAGAC
TGTTAGATTTAAATGTATATTGATGAGATAAAAAGCAAACCTGTGCCTAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAA
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5' Read Nucleotide Sequence:	>OriGene 5' read for NM_000557 unedited CATATTTGTATACGACTCACTATAGGCGCCGCGTAATCAGATCTGGTACCGGTCCGGAA TTCCCGGGATCGTGCCTACTGGTTAGCGATAATACTGGCAGCGCGACCGGTTTCTGAGGG TTGTTACACCTTGTGCTCAGACGCTCCGAGAAGCTTCAGGCAGCATAACACTTACAGTAG AGACAGGGTTTACCATGTTAGCCAGGATGGTCTTGATCTCCTGACCTCGTGATCCACCT GCCTCGGCCTCCCAAGGTGCTGGGATTGCAGGCGTGAGCCACTGCGCCTGGCCGAATTT ACTTCATTGAATCTCCAACAAGAGTCCTGTGAGCTGCTGACTGGAGACGGTGCACGCTG GATACGAGAGCATTTCCACTATGGGACTGGATACAAACACACCCGGCAGACTTCAAGA GTCTCAGACTGAGGAGAAAGCCTTTCTTCTGCTGCTACTGCTGCTGCCGCTGCTTTTGA AAGTCCACTCCTTTCATGGTTTTTCTGCCAAACCAGAGGCACCTTTGCTGCTGCCGCTG TTCTCTTTGGTGTATTAGCGGCTGGCCAGAGGATGAGACTCCCCAACTCCTCACTTT CTTGCTTTGGTACCTGGCTTGGCTGGACCTGGAATTCATCTGACTGTGTTTGGGTGCC CTGATTTGGGCCAAAGACCCAGGGGACAGCCAGGATTGGCCAAACAGAGGCCAAGGA GAGGCCCCCTGGGCCCGAACGTATCAGGCCGGGGGTCAAACCTGGGGGGGGGGCC ACCAAGCCAATGCCGGGAAAGGGGACCCGGGACAAACAGGGGCTGACACCCCAAAA GAGAGAACCAACAAGAGCGCCAAAAAGGGAGGGCCGAAACCCAGCAGGAACCCCTCC CCTAACAAGCGGGTACAAGCAAAGGAGAGGACCCAAAAGGAAGCTT
Restriction Sites:	Please inquire
ACCN:	NM_000557
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<u>NM_000557.2</u> , <u>NP_000548.1</u>
RefSeq Size:	2383 bp
RefSeq ORF:	1506 bp
Locus ID:	8200
UniProt ID:	<u>P43026</u>
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

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]

Transcript Variant: This variant (2) differs in the 5' UTR compared to variant 1. Both variants 1 and 2 encode the same protein.