

Product datasheet for **SC118070**

TGF beta 2 (TGFB2) (NM_003238) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TGF beta 2 (TGFB2) (NM_003238) Human Untagged Clone
Tag:	Tag Free
Symbol:	TGF beta 2
Synonyms:	G-TSF; LDS4; TGF-beta2
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_003238 edited
GAATTCGGCACGAGGGTCTCTTTTTTCCCCTCCTCATTGCTCCAAGAATTTTTTCTTC
TTACTCGCCAAAGTCAGGGTTCCCTCTGCCCGTCCCGTATTAATTTCCACTTTTGAA
CTACTGGCCTTTTCTTTTAAAGGAATCAAGCAGGATACGTTTTTCTGTTGGGCATTGA
CTAGATTGTTTGCAAAAGTTTCGCATCAAAAACAACAACAACAACAAAAACCAACAA
CTCTCCTTGATCTATACTTTGAGAATTGTTGATTTCTTTTTTTTATTCTGACTTTTTAAA
ACAATTTTTTTTCCACTTTTTTAAAAAATGCACTACTGTGTGCTGAGCGCTTTTCTGAT
CCTGCATCTGGTCACGGTCGCGCTCAGCCTGTCTACCTGCAGCACACTCGATATGGACCA
GTTTCATGCGCAAGAGGATCGAGGCGATCCGCGGGCAGATCCTGAGCAAGCTGAAGCTCAC
CAGTCCCCCAGAAGACTATCCTGAGCCCAGGAAGTCCCCCGGAGGTGATTTCCATCTA
CAACAGCACCAGGGACTTGCTCCAGGAGAAGGCGAGCCGGAGGGCGGCCCTGCGAGCG
CGAGAGGAGCGACGAAGAGTACTACGCCAAGGAGGTTACAAAATAGACATGCCGCCCTT
CTTCCCCTCCGAAAATGCCATCCCGCCACTTTCTACAGACCCTACTTCAGAATTGTTG
ATTTGACGTCTCAGCAATGGAGAAGAATGCTTCCAATTTGGTGAAGCAGAGTTCAGAGT
CTTTCGTTTGCAACCCAAAAGCCAGAGTGCCTGAACAACGGATTGAGCTATATCAGAT
TCTCAAGTCCAAAGATTTAACATCTCCAACCCAGCGCTACATCGACAGCAAAGTTGTGAA
AAACAAGAGCAGAAGGCGAATGGCTCTCCTTCGATGTAAGTGTGCTGTTTCATGAATGGCT
TCACCATAAAGACAGGAACCTGGGATTTAAAAAAGCTTACACTGTCCCTGCTGCACTTT
TGTACCATCTAATAATTACATCATCCCAAATAAAAGTGAAGAAGTGAAGCAAGATTTGC
AGGTATTGATGGCACCTCCACATATACCAGTGGTGATCAGAAAATAAAAGTCCACTAG
GAAAAAAACAGTGGGAAGACCCACATCTCCTGCTAATGTTATTGCCCTCTACAGACT
TGAGTCAACAACAGACCAACCGGCGGAAGAAGCGTGTCTTTGGATGCGGCCTATTGCTTTAG
AAATGTCAGGATAATTGCTGCCTACGTCCACTTACATTTGATTTCAGAGGGGATCTAGG
GTGGAAAATGGATACACGAACCCAAAGGGTACAATGCCAACTTCTGTGCTGGAGCATGCC
GTATTTATGGAGTTCAGACACTCAGCACAGCAGGGTCTGAGCTTATATAATACCATAAA
TCCAGAAGCATCTGCTTCTCCTGCTGCGTGTCCCAAGATTTAGAACCTTAACCATTCT
CTACTACATTGGCAAAACACCCAAGATTGAACAGCTTTCTAATATGATTGTAAAGCTTG
CAAATGCAGCTAAAATTTTGGAAAAGTGGCAAGACCAAAATGACAATGATGATGATAAT
GATGATGACGACGACAACGATGATGCTTGTAAACAAGAAAACATAAGAGAGCCTTGGTTCA
TCAGTGTTAAAAAATTTTTGAAAAGCGGTACTAGTTCAGACACTTTGGAAGTTTGTGTT
CTGTTTGTAAAAGTGGCATCTGACACAAAAAATGTTGAAGGCCTTATTCTACATTTTAC
CTACTTTGTAAGTGAGAGAGACAAGAAGCAAAATTTTTTTTAAAGAAAAAATAAAACTG
GAAGAATTTATTAGTGTTAATTATGTGAACAACGACAACAACAACAACAACAACAACAG
GAAAATCCCATTAAGTGGAGTTGCTGTACGTACCGTTCCTATCCCAGCCTCACTTGATT
TTTCTGTATTGCTATGCAATAGGCACCCTTCCCATTCTTACTCTTAGAGTTAACAGTGAG
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GTATAAAGTGGAGACCAAACTTTGCCAGAACTCATGGATGGCTTAAGGAACTTGAAC
TCAAACGAGCCAGAAAAAAGAGGTCATATTAATGGGATGAAAACCAAGTGAGTTATTA
TATGACCGAGAAAAGTCTGCATTAAGATAAAGACCCTGAAAACACATGTTATGTATCAGT
GCCTAAGGAAGCTTCTTGTAAAGTCCAAAAACTAAAAAGCCTGTTAATAAAGAAAATTT
CAGTCAGAAAAAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACTCGAC
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5' Read Nucleotide Sequence:

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>OriGene 5' read for NM_003238 unedited
TCAGAATTTTGTAAACGACTCACTTATAGGGCGGCCGGAATTCGCACGAGGGTCTCTT
TTTTTCCCACATCTCATTGCTCCAANAATTTTTTTCTTCTTACTCGCCAAAGTCAGGGTTC
CCTCTGCCCGTCCCGTATTAATATTTCCACTTTTGGAACTACTGGCCTTTTCTTTTTAA
GGAATTC AAGCAGGATACGTTTTCTGTTGGCATTGACTAGATTGTTTGCAAAGTTTC
GCATCAAAAACAACAACAACAACAACAACAACAACAACAACAACAACAACAACAACAACA
GAATTGTGATTCTTTTTTTTATTCTGACTTTTAAAAACAACCTTTTTTTTCCACTTTTT
TAAAAAATGCACTACTGTGTGCTGAGCGCTTTTCTGATCCTGCATCTGGTCACGGTCGCG
CTCAGCCTGTCTACCTGCAGCACACTCGATATGGACCAGTTCATGCGCAAGAGGATCGAG
GCGATCCGCGGGCAGATCCTGAGCAAGCTGAAGCTCACCAGTCCCCCAGAAGACTATCCT
GAGCCCGAGGAAGTCCCCCGGAGGTGATTTCCATCTACAACAGCACCAGGGACTTGCTC
CAGGAGAAGGCGAGCCGGAGGGCGCCGCTGCGAGCGCGAGAGGAGCGACAAGAGTAC
TACGCCAAGGAGGTTTACAAAATAGACATGCCGCCCTTCTCCCTCCGAAAATGCCATC
CCGCCCACTTTCTACAGACCCTACTTCAGAATTGTTGATTTGACGTCTCAGCAATGGAG
AAAGATGCTTNNCAATTNGTGAAAGCAGAGTTCAGAAGTCTTTGTTTGCAGAAACCCAA
AGCCAGAGTGCCCTGACAACGNATGAGCTATATCAGATTCTCAAGTCCAAAAGATTACA
TNTNCAACCAGCGCTCATNGCAGNNAAGTGTGAAAACAGACAGAAGCGATGGCTCCN
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3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_003238 unedited
GAACCGCGGCCGCAATCTAGGATCGAGNTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
TTTTCTGACTGAAAGTTTCTTTTATTAACAGGCTTTTAGTTTTTGGACCTTACAAAAG
CTTCCTTAGGCAGCTGATACATAACATGTGTTTTCAGGGTCTTTATCTTAATGCAAACCT
TCTCGGTATATAATAACTCACTTGGGTTTTATCCCATTAATATGACCTTTTTTTTTCT
GGCTCGTTTGAGTTCAAGTTCCTTAAGCCATCCATGAGTTTCTGGCAAAGTATTTGGTCT
CCACTTTATACACCTGTTTTATTTTCCAAGGGCAATGAAACGTTTATTATAGTAACAC
ACAATAAATAACTCACTGTTAACTCTAAAAGTAAAAATGGGAAGGGTGCCTATTGCATAG
CAATACAGAAAAATCAAGTGAGGCGCGGGATAGGAACGGTACGTACAGCAACTCCACTTA
ATGGGATTTTCTGTTTGTGTTGTTGCTGTTGTTGCCGTTGTTACATAATTAACACTA
ATAAATCTTCCAGTGTATTTTTTTCTTTAAAAAAAATTTGCTTCTTGTCTCTCTCAC
TTACAAAAGTAGGTGAAATGTACAATAAGGCCTTTAACATTTTTTTTGTGTCAGACGCCAGT
TTTACCAAACAGAACACAACAACTTCCAAAGTGTCTGAACTAGTACCGCCTTTTCAAAAATT
TCTTACACCTGAGAACCAAGCTCTCTATGTTTTCTTGTTACAAGCACATCGGTGCCGGCC
GCCTCATCATAATCATATCATTGCCATTTTGCCTTGCCACTTTTCCAAGAATTTTAGCT
GCTTTTGAAGACTTCCAATCATATAGAAAAGCTGTTTCCTTTGGTGTGTTTGCATGTA
CTAAAAATGGTAGAGTTAATCTTGGCCCGCACAGAAAACCAAGCTTTGGATTATGAT
TTAATACCCAAGACCTGTGTGCCGAAGTTGAAT
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Restriction Sites:

NotI-NotI

ACCN:

NM_003238

Insert Size:

2290 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

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_003238.1](#), [NP_003229.1](#)

RefSeq Size: 1695 bp

RefSeq ORF: 1245 bp

Locus ID: 7042

UniProt ID: [P61812](#)

Cytogenetics: 1q41

Domains: TGFb_propeptide, TGF-beta

Protein Families: Druggable Genome, Secreted Protein, Transmembrane

Protein Pathways: Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Cytokine-cytokine receptor interaction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM), MAPK signaling pathway, Pancreatic cancer, Pathways in cancer, Renal cell carcinoma, 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 a latency-associated peptide (LAP) and a mature peptide, and is found in either a latent form composed of a mature peptide homodimer, a LAP homodimer, and a latent TGF-beta binding protein, or in an active form consisting solely of the mature peptide homodimer. The mature peptide may also form heterodimers with other TGF-beta family members. Disruption of the TGF-beta/SMAD pathway has been implicated in a variety of human cancers. A chromosomal translocation that includes this gene is associated with Peters' anomaly, a congenital defect of the anterior chamber of the eye. Mutations in this gene may be associated with Loeys-Dietz syndrome. This gene encodes multiple isoforms that may undergo similar proteolytic processing. [provided by RefSeq, Aug 2016]

Transcript Variant: This variant (2) lacks an in-frame exon in the 5' coding region compared to variant 1. The resulting isoform (2) is shorter than isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.