

## Product datasheet for **SC321871**

### SMAD3 (NM\_005902) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SMAD3 (NM_005902) Human Untagged Clone
Tag:	Tag Free
Symbol:	SMAD3
Synonyms:	HSPC193; HsT17436; JV15-2; LDS1C; LDS3; MADH3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene sequence for NM\_005902.3  
 GCCGTGGGAGCCGCTCCGGGCGCAGGGCCGCGCCGAGCCCCGAGGCTGCAGCGCCG  
 GGCCCGGCCCGCGCCCGGCAACTTCGCCGAGAGTTGAGGCGAAGTTTGGGCGACCCG  
 GCAGGCCCGGCCGAGCTCCCCTCTGCGCCCCGGCGTCCCGTCGAGCCAGCCCCGCG  
 GGGGCGCTCCTCGCCGCCGCGGCCCTCCCCAGCCATGTCGTCCATCCTGCCTTCACT  
 CCCCAGATCGTGAAGCGCTGCTGGGCTGGAAGAAGGGCGAGCAGAACGGGCAGGAGGAG  
 AAATGGTGCAGAGAAGCGGTCAAGAGCCTGGTCAAGAACTCAAGAAGACGGGGCAGCTG  
 GACGAGCTGGAGAAGGCCATCACCACGCAGAACGTCAACACCAAGTGCATCACCATCCCC  
 AGGTCCCTGGATGGCCGTTGTCAGGTGTCCATCGGAAGGGGCTCCCTCATGTCTACTAC  
 TGCCGCTGTGGCGATGGCCAGACCTGCACAGCCACCACGAGCTGCGGGCCATGGAGCTG  
 TGTGAGTTCGCCTTCAATATGAAGAAGGACGAGGTCTGCGTGAATCCCTACCACTACCAG  
 AGAGTAGAGACACCAGTTCTACCTCCTGTGTTGGTGCCACGCCACACAGAGATCCCGCC  
 GAGTTCCCCCACTGGACGACTACAGCCATTCCATCCCCGAAAACACTAATTCCCCGCA  
 GGCATCGAGCCCCAGAGCAATATCCAGAGACCCACCCCTGGTACCTGAGTGAAGAT  
 GGAGAAACCAAGTACCACAGATGAACCACAGCATGGACGCAGGTTCTCCAAACCTATCC  
 CCGAATCCGATGTCCCCAGCACATAATAACTTGGACCTGCAGCCAGTTACCTACTGCGAG  
 CCGGCCTTCTGGTGTCCATCTCTACTACGAGCTGAACCAGCGCGTCCGGGAGACATTC  
 CACGCCTCGCAGCCATCCATGACTGTGGATGGCTTACCAGCCCCCTCAAATTCGGAGCGC  
 TTCTGCCTAGGGCTGCTCTCAAATGTCAACAGGAATGCAGCAGTGGAGCTGACACGGAGA  
 CACATCGGAAGAGGCGTGGGCTCTACTACATCGGAGGGGAGGTCTTCGAGAGTGCCTC  
 AGTGACAGCGCTATTTTTGTCCAGTCTCCAACTGTAACCAGCGCTATGGCTGGCACCCG  
 GCCACCGTCTGCAAGATCCCACAGGATGCAACCTGAAGATCTTCAACAACCAAGGAGTTC  
 GCTGCCCTCCTGGCCAGTCCGTCACACAGGGCTTTGAGGCTGTCTACCAGTTGACCCGA  
 ATGTGCACCATCCGCATGAGCTTCGTCAAAGGCTGGGGAGCGGAGTACAGGAGACAGACT  
 GTGACCAGTACCCCTGCTGGATTGAGCTGCACCTGAATGGGCTTTGCAAGTGGCTTAC  
 AAGTCTCACCCAGATGGGCTCCCAAGCATCCGCTGTTCCAGTGTGTCTTAGAGACAT  
 CAAGTATGGTAGGGGAGGGCAGGCTTGGGGAAAATGGCCATGCAGGAGGTGGAGAAAATT  
 GGAAGTCTACTCAACCCATTGTTGTCAAGGAAGAAGAAATCTTTCTCCCTCAACTGAAGG  
 GGTGCACCCACCTGTTTTCTGAAACACACGAGCAAACCCAGAGGTGGATGTTATGAACAG  
 CTGTGTCTGCCAAACACATTTACCCTTTGGCCCCACTTTGAAGGGCAAGAAATGGCGTCT  
 GCTCTGGTGGCTTAAGTGAAGCAGAACAGGTAGTATTACACCACCGCCCCCTCCCCCAG  
 ACTCTTTTTTTGAGTGCAGCTTTCTGGGATGTCACAGTCCAACCAGAAACACCCCTCTG  
 TCTAGGACTGCAGTGTGGAGTTCACCTTGAAGGGCGTCTAGGTAGGAAGAGCCCGCAG  
 GGCCATGCAGACCTCATGCCAGCTCTCTGACGCTTGTGACAGTGCCTCTTCCAGTGAAC  
 ATCCCAGCCCAGCCCCGCCCGCCCCGCCACCCTCCAGCAGACCTTGCCCCTTGTG  
 AGCTGGATAGACTTGGATGGGGAGGGAGGGAGTTTTGTCTGTCTCCCTCCCCTCAGAA  
 ACATACTGATTGGGAGGTGCGTGTTCAGCAGAACCTGCACACAGGACAGCGGGAAAAATC  
 GATGAGCGCCACCTCTTTAAAACTCACTTACGTTTGTCTTTTCACTTTGAAAAGTTG  
 GAAGGATCTGCTGAGGCCAGTGCATATGCAATGTATAGTGTCTATTATCACATTAATCT  
 CAAAGAGATTGCAATGACGGTAAGTGTTCATGAAGCAGGAGGCCCTTGTCTGGGATG  
 GCATTTGGTCTCAGGCAGCACCACACTGGTGCCTCTCCAGTCATCTGTAAGAGCTTGT  
 CCAGATTCTGATGCATACGGCTATATTGGTTTATGTAGTCAGTTGCATTCATTAATCAA  
 CTTTATCATAAAAAAAAAAAAAAA

**Restriction Sites:** Please inquire

**ACCN:** NM\_005902

<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	<p>This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.</p>
<b>Components:</b>	<p>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).</p>
<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_005902.3</a> , <a href="#">NP_005893.1</a>
<b>RefSeq Size:</b>	6256 bp
<b>RefSeq ORF:</b>	1278 bp
<b>Locus ID:</b>	4088
<b>UniProt ID:</b>	<a href="#">P84022</a>
<b>Cytogenetics:</b>	15q22.33
<b>Domains:</b>	DWB, DWA, MH1
<b>Protein Families:</b>	Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transcription Factors
<b>Protein Pathways:</b>	Adherens junction, Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway, Wnt signaling pathway

**Gene Summary:**

The SMAD family of proteins are a group of intracellular signal transducer proteins similar to the gene products of the Drosophila gene 'mothers against decapentaplegic' (Mad) and the C. elegans gene Sma. The SMAD3 protein functions in the transforming growth factor-beta signaling pathway, and transmits signals from the cell surface to the nucleus, regulating gene activity and cell proliferation. It also functions as a tumor suppressor. Mutations in this gene are associated with aneurysms-osteoarthritis syndrome and Loeys-Dietz Syndrome 3. [provided by RefSeq, Nov 2019]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1).