

## Product datasheet for RC227712

### SMAD3 (NM\_001145104) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SMAD3 (NM_001145104) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMAD3
Synonyms:	HSPC193; HsT17436; JV15-2; LDS1C; LDS3; MADH3
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC227712 representing NM_001145104 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGTCGTCACCTCTGCCTTTCACTCCCCGATCGTGAAGCGCCTGCTGGGCTGGAAGAAGGGCGAGCAGA  
ACGGGCAGGAGAGAAATGGTGCAGAGAAGCGGTCAAGAGCCTGGTCAAGAACTCAAGAAGACGGGGCA  
GCTGGACGAGCTGGAGAAGGCCATCACACGCAGAACGTCAACACCAAGTGCATCACCATCCCCAGGTCC  
CTGGATGGCCGGTTGCAGGTGTCCATCGGAAGGGGCTCCCTCATGTCTACTGCCGCCTGTGGCGAT  
GGCCAGACCTGCACAGCCACCACGAGCTGCGGGCCATGGAGCTGTGTGAGTTCGCCTTCAATATGAAGAA  
GGACGAGGTCTGCGTGAATCCCTACCACTACCAGAGAGTAGAGACACCAGTTCTACCTCCTGTGTTGGTG  
CCACGCCACACAGAGATCCCGGCCGAGTCCCCCACTGGACGACTACAGCCATTCCATCCCCGAAAACA  
CTAACTCCCCCGAGGCATCGAGCCCCAGAGCAATATCCAGAGACCCCAACCCCTGGCTACCTGAGTGA  
AGATGGAGAAACCAGTGACCACCAGATGAACCACAGCATGGACGCAGGTTCTCCAAACCTATCCCCGAAT  
CCGATGTCCCAGCACATAATAACTTGGACCTGCAGCCAGTTACCTACTGCGAGCCGGCCTTCTGGTGCT  
CCATCTCCTACTACGAGCTGAACCAGCGGTGCGGGAGACATCCACGCCCTGCAGCCATCCATGACTGT  
GGATGGCTTACCAGCCCTCCAATTCGGAGCGTTCTGCCTAGGGCTGCTCTCCAATGTCAACAGGAAT  
GCAGCAGTGGAGCTGACACGGAGACACATCGGAAGAGGCGTGCAGCTCTACTACATCGGAGGGGAGGTCT  
TCGACAGTGCCTCAGTGACAGCGCTATTTTTGTCCAGTCTCCAACTGTAACCAGCGCTATGGCTGGCA  
CCCGGCCACCGTCTGCAAGATCCCACAGGATGCAACCTGAAGATCTTCAACAACCAGGAGTTCGCTGCC  
CTCCTGGCCAGTCGGTCAACCAGGGCTTTGAGGCTGTCTACCAGTTGACCCGAATGTGCACCATCCGCA  
TGAGCTTCGTCAAAGGCTGGGAGCGGAGTACAGGAGACAGACTGTGACCAGTACCCCTGCTGGATTGA  
GCTGCACCTGAATGGCCCTTGCAGTGGCTTGACAAGTCTCACCCAGATGGGCTCCCCAAGCATCCG  
TGTTCCAGTGTCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTAA



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**Protein Sequence:** >RC227712 representing NM\_001145104  
 Red=Cloning site Green=Tags(s)

MSSILPFPPIVKRLLGWKKGEQNGQEEKWCEKAVKSLVKLKKTKQLDELEKAITTQNVNTKCITIPRS  
 LDGRLQVSHRKGGLPHVIYCLWRWPDLSHHELAMELCEFAFNMKKDEVCVNPHYHYQRVETPVLPPVLV  
 PRHTEIPAEPPLDDYSHSIPENTNFPAGIEPQSNIPETPPPGLYSEDGETSDHQMNHSM DAGSPNLSPN  
 PMSPAHNLDLQPVTYCEPAFWCSI SYELNQRVGETFHASQPSMTVDGFTDPSNSERFCLGLLSNVNRRN  
 AAVELTRRHIGRVRLYYIGGEVFAECLSDSAIFVQSPNCNQRYGWHPATVCKIPPGCNLKFNNQEFAA  
 LLAQSVNQGF EAVYQLTRMCTIRMSFVKGWGA EYRRQTVTSTPCWIELHLNGLPLQLDKVLTQMGSPSIR  
 CSSVS

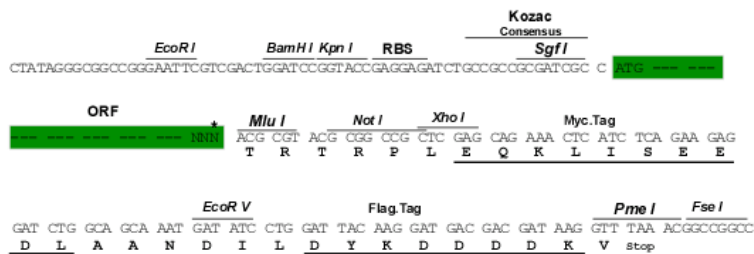
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

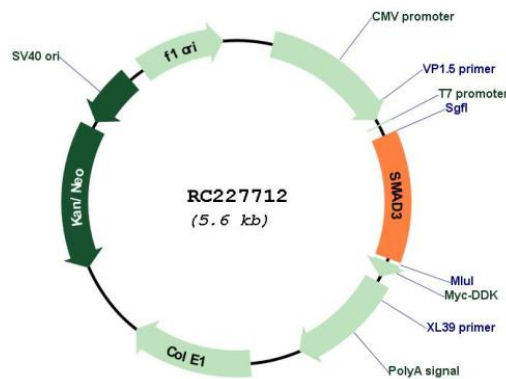
**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**



**ACCN:** NM\_001145104

<b>ORF Size:</b>	1278 bp
<b>OTI Disclaimer:</b>	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>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<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_001145104.1</a> , <a href="#">NP_001138576.1</a>
<b>RefSeq Size:</b>	5441 bp
<b>RefSeq ORF:</b>	693 bp
<b>Locus ID:</b>	4088
<b>UniProt ID:</b>	<a href="#">P84022</a>
<b>Cytogenetics:</b>	15q22.33
<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
<b>MW:</b>	48.1 kDa
<b>Gene Summary:</b>	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]