

## Product datasheet for **RC218788**

### SMAD5 (NM\_001001419) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SMAD5 (NM_001001419) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SMAD5
Synonyms:	DWFC; JV5-1; MADH5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC218788 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGACGTCAATGGCCAGCTTGTCTTTTACTAGTCCAGCAGTAAAGCGATTGTTGGGCTGGAACAAG  
 GTGATGAGGAGGAAATGGGCAGAAAAGCAGTTGATGCTTTGGTGAAGAACTAAAAAGAAAAGGG  
 TGCCATGGAGGAAGCTGGAGAAAGCCTTGAGCAGTCCAGGACAGCCGAGTAAATGTGTCACTATCCAGAG  
 TCTTTAGATGGACGCTGCAGGTTTCTCACAGAAAAGGCTTACCCCATGTTATATATTGTCGTGTTGGC  
 GCTGGCCGGATTGCAGAGTCAATGAGCTAAAGCCGTTGGATATTTGTGAATTCCTTTTGGACTAA  
 GCAAAAAGAGTTTGTATCAACCCATACCACTATAAGAGAGTGGAGAGTCCAGTCTTACCTCCAGTATTA  
 GTGCCTCGTCATAATGAATCAATCCACAACACAGCCTTCTGGTTCAGTTTAGGAACCTGAGCCACAATG  
 AACACACATGCCACAAAATGCCAGTTTCCAGATTCTTCCACCAGCCCAACAACACTCCTTTTCCCTT  
 ATCTCCAACAGCCCTTATCCCCTTCTCTGCTAGCAGCACATATCCAACTCCCAGCAAGTTCTGGA  
 CCAGGAAGTCCATTTAGCTCCAGCTGATACGCCTCCTCCTGCCTATATGCCACCTGATGATCAGATGG  
 GTCAAGATAAATCCAGCCTATGGATACAAGCAATAATATGATTCCTCAGATTATGCCCAGTATATCCAG  
 CAGGGATGTTAGCCTGTTGCCTATGAAGAGCCTAAACATTGGTGTCAATAGTCTACTATGAATTAAC  
 AATCGTGTGGAGAAGCTTTTATGCATCTTCTACTAGTGTGTTAGTAGATGGATTACAGATCCTTCAA  
 ATAACAAAAGTAGATTCTGCTGGGTTTGTGTCAAATGTTAATCGTAATTCGACAATTGAAAACACTAG  
 GCGACATATTGAAAAGGTGTTCACTGTACTATGTTGGTGGAGAGGTGTATGCGGAATGCCTCAGTGAC  
 AGCAGCATATTTGTACAGAGTAGGAAGTCAACTTTTATCATGGCTTTTATCCCACCAGTCTGTGAAGA  
 TTCCCAGCAGCTGCAGCCTCAAAAATTTTAAACAATCAGGAGTTTGTCTCAGCTTCTGGCTCAATGTCAA  
 CCATGGGTTTGGAGCAGTATATGAGCTCACAAAATGTGTACCATTTCGGATGAGTTTTGTCAAGGGTTGG  
 GGAGCAGAATATCACCGCAGGATGTAACCAGCACCCATGTTGGATTGAGATTCATCTTATGGGCCTC  
 TTCAGTGGCTGGATAAAGTCTTACTCAGATGGCTCCCCTCTGAACCCCATATCTTCTGTTTCA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC218788 protein sequence  
 Red=Cloning site Green=Tags(s)

MTSMASLFSFTSPAVKRLLGWKQGDEEEKWAEKAVDALVKLKKKKGAMEELEKALSSPGQPSKCVTIPR  
 SLDGRLQVSHRGLPHVIYCRVWRWDLQSHHELKPLDICEFPFGSKQKEVCINPYHYKRVESPVLPV  
 VPRHNEFNPQHSLLVQFRNLSHNEPHMPQNAFPDSFHQPNNTFPPLSPNSPYPPSPASSTYPNSPASSG  
 PGSPFQLPADTPPPAYMPPDDQMGQDNSQPMDSNNMIPQIMPSSSRDVPVAYEYPKHWCIVVYELN  
 NRVGEAFHASSTSVLVDGFTDPSNNKSRFCLGLLSNVNRNSTIENTRRRHIGKGVHLYYVGGEVYAECLSD  
 SSIFVQSRNCFHHGFHPTTVCKIPSSCSLKFNNQEFALLAQSVNHGFEAVYELTKMCTIRMSFVKGW  
 GAEYHRQDVTSTPCWIEIHLHGPLQWLDKVLQMGSPLNPISSVS

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6307\\_d02.zip](https://cdn.origene.com/chromatograms/mk6307_d02.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_001001419

**ORF Size:** 1395 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\\_001001419.3](#)

**RefSeq Size:** 7098 bp

**RefSeq ORF:** 1398 bp

**Locus ID:** 4090

**UniProt ID:** [Q99717](#)

**Cytogenetics:** 5q31.1

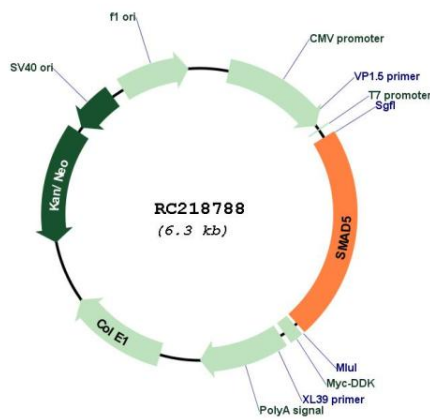
**Protein Families:** Cancer stem cells, Druggable Genome, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transcription Factors

**Protein Pathways:** TGF-beta signaling pathway

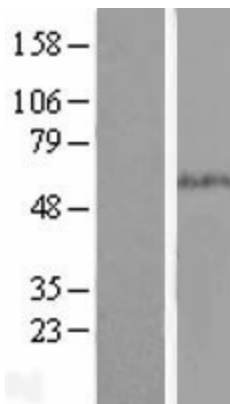
**MW:** 52.3 kDa

**Gene Summary:** The protein encoded by this gene is involved in the transforming growth factor beta signaling pathway that results in an inhibition of the proliferation of hematopoietic progenitor cells. The encoded protein is activated by bone morphogenetic proteins type 1 receptor kinase, and may be involved in cancer. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2014]

**Product images:**



Circular map for RC218788



Western blot validation of overexpression lysate (Cat# [LY424347]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218788 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).