

Product datasheet for **RC224544**

SMAD5 (NM_001001420) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMAD5 (NM_001001420) 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:

>RC224544 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACGTC AATGGCCAGCTTGT TTTCTTTACTAGTCCAGCAGTAAAGCGATTGTTGGGCTGGAACAAG
 GTGATGAGGAGGAAAATGGGCAGAAAAGCAGTTGATGCTTTGGTGAAGAACTAAAAAGAAAAGGG
 TGCCATGGAGGAACTGGAGAAAGCCTTGAGCAGTCCAGGACAGCCGAGTAAATGTGTCACTATCCAGAG
 TCTTTAGATGGACGCCTGCAGGTTTCTCACAGAAAAGGCTTACCCCATGTTATATATTGTCGTGTTGGC
 GCTGGCCGGATTGTCAGAGTCAATGAGCTAAAGCCGTTGGATATTTGTGAATTCCTTTTGGATCTAA
 GCAAAAAGAAGTTTGTATCAACCCATACCACTATAAGAGAGTGGAGAGTCCAGTCTTACCTCCAGTATTA
 GTGCCTCGTCATAATGAATTCATCCACAACACAGCCTTCTGGTTCAGTTTAGGAACCTGAGCCACAATG
 AACACACATGCCACAAAATGCCAGTTTCCAGATTCTTCCACCAGCCCAACAACACTCCTTTTCCCTT
 ATCTCCAAACAGCCCTTATCCCCTTCTCTGCTAGCAGCACATATCCAACTCCCAGCAAGTTCTGGA
 CCAGGAAGTCCATTTAGCTCCAGCTGATACGCCTCCTCCTGCCTATATGCCACCTGATGATCAGATGG
 GTCAAGATAAATCCAGCCTATGGATACAAGCAATAATATGATTCCTCAGATTATGCCCAGTATATCCAG
 CAGGGATGTTAGCCTGTTGCCTATGAAGAGCCTAAACATTGGTGTCAATAGTCTACTATGAATTAAC
 AATCGTGTGGAGAAGCTTTTATGCATCTTCTACTAGTGTGTTAGTAGATGGATTACAGATCCTTCAA
 ATAACAAAAGTAGATTCTGCTGGGTTTGTGTCAAATGTTAATCGTAATTCGACAATTGAAAACACTAG
 GCGACATATTGAAAAGGTTCATCTGACTATGTTGGTGGAGAGGTGTATGCGGAATGCCTCAGTGAC
 AGCAGCATATTTGTACAGAGTAGGAAGTCAACTTTTATCATGGCTTTTATCCCACCAGTCTGTGAAGA
 TTCCCAGCAGCTGCAGCCTCAAAAATTTTAAACAATCAGGAGTTTGTCTCAGCTTCTGGCTCAATGTCAA
 CCATGGGTTTGGAGCAGTATATGAGCTCACAAAATGTGTACCATTTCGGATGAGTTTTGCAAGGGTTGG
 GGAGCAGAATATCACCGCAGGATGTAACCAGCACCCATGTTGGATTGAGATTATCTTATGGGCCTC
 TTCAGTGGCTGGATAAAGTCTTACTCAGATGGCTCCCCTCTGAACCCCATATCTTCTGTTTCA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC224544 protein sequence
 Red=Cloning site Green=Tags(s)

MTSMASLFSFTSPAVKRLLGWKQGDEEEKWAEKAVDALVKKLLKKKKGAMEELEKALSSPGQPSKCVTI
 PRLDGRQLVSHRKLPHVIYCRVWRWDLQSHHELKPLDICEFPFGSKQKEVCINPYHYKRVE
 SPVLPVLPVPRHNEFNPQHSLLVQFRNLSHNEPHMPQNAATFPDSFHQPNNTFPPLSPNSPYPP
 SPASSTYPNSPASSGPGSPFQLPADTPPPAYMPPDDQMGQDNSQPMDSNNMIPQIMPSSSRD
 VQPVAYEYPKHWCIVVYELNNRVGEAFHASSTSVLVDGFTDPSNNKSRFCLGLLSNVNRNST
 IENTRRRHIGKGVHLYYVGGEVYAECLSDSSIFVQSRNCFHHGFHPTTVCKIPSSCSLKI
 FNNQEFQLLAQSVNHGFEAVYELTKMCTIRMSFVKGWGAEYHRQDVTSTPCWIEIHLHG
 PLQWLDKVLQMGSPLNPISSVS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6001_b12.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001001420

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_001001420.2](#), [NP_001001420.1](#)

RefSeq Size: 6939 bp

RefSeq ORF: 1398 bp

Locus ID: 4090

UniProt ID: [Q99717](#)

Cytogenetics: 5q31.1

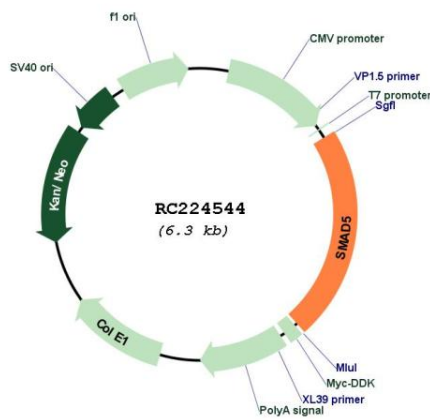
Protein Families: Cancer stem cells, Druggable Genome, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transcription Factors

Protein Pathways: TGF-beta signaling pathway

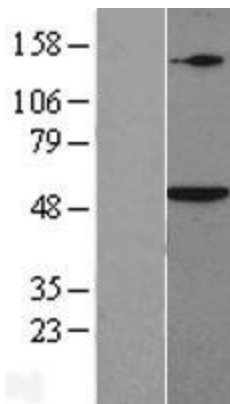
MW: 52.3 kDa

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 RC224544



Western blot validation of overexpression lysate (Cat# [LY424348]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224544 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).