

Product datasheet for **RC210400**

MADH7 (SMAD7) (NM_005904) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MADH7 (SMAD7) (NM_005904) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MADH7
Synonyms:	CRCS3; MADH7; MADH8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC210400 representing NM_005904
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTT**CAGACCAAA**CGATCTGCCTCGTCCGGCTCTCTGGAGGAGCCGTGCGCCCGCGGCGAGGACG
 AGGAGGAGGGCGCAGGGGAGGTGGAGGAGGAGCGAGCTGCGGGGAGAAGGGGGCAGCGACAGCCGAGC
 GCATGGGGCCGGTGGCGGCGCCCGGGCAGGGCTGGATGCTGCCTGGGCAAGGCGGTGCGAGGTGCCAAA
 GGT**CACCACCATCC**CA**CCCGCCAGCCGCGGGC**CGCGCGCCGGGGCGCCGAGGCGGATCTGAAGG
 CGCTCACGCACTCGGTGCTCAAGAACTGAAGGAGCGGCAGCTGGAGCTGCTGCTCCAGGCCGTGGAGTC
 CCGCGGCGGGACGCGACCGGTGCTCCTGCTGCCCGCGCCCTGGACTGCAGGCTGGCCCGGGGGCG
 CCCGCGGCGCGCAGCCTGCGCAGCCGCCCTCGTCTACTCGCTCCCCCTCCTGCTGTCAAAGTGTTC
 GGTGGCCGGATCTCAGGCATTCCTCGAAGTCAAGAGGCTGTGTTGCTGTGAATTTACGGGAAGATCAA
 CCCCAGCTGGTGTGCTCAACCCCATCACCTTAGCCGACTCTGCGAACTAGAGTCTCCCCCTCCT
 TACTCCAGATACCGATGGATTTCTCAAACCAACTGCAGACTGTCCAGATGCTGTGCCTTCTCCGCTG
 AAACAGGGGGAACGAATTATCTGGCCCTGGGGGGCTTTCAGATCCCAACTTCTCTGGAGCCTGGGGA
 TCGGTCACACTGGTGCCTGGTGGCATACTGGGAGGAGAAGACGAGAGTGGGGAGGCTCTACTGTGCCAG
 GAGCCCTCTGGATATCTTCTATGATCTACCTCAGGGGAATGGCTTTTGCCCTCGACAGCTCAATTCGG
 ACAACAAGAGTCAGCTGGTGCAGAAGGTGCGGAGCAAAATCGGCTGCGGCATCCAGCTGACGCGGGAGGT
 GGATGGTGTGGGTGTACAACCGCAGCAGTTACCCCATCTTCAAGTCCGCCACTGGACAACCCG
 GACTCCAGGACGCTGTTGGTACACAAGGTGTTCCCGGTTTCTCCATCAAGGCTTTCGACTACGAGAAGG
 CGTACAGCCTGCAGCGGCCCAATGACCAGAGTTTATGCAGCAGCCGTGGACGGGCTTACCGTGCAGAT
 CAGCTTTGTGAAGGGCTGGGGCCAGTGTACACCCGCCAGTTCATCAGCAGCTGCCCGTGTGGCTAGAG
 GTCATCTTCAACAGCCGG

ACGCGTACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC210400 representing NM_005904
 Red=Cloning site Green=Tags(s)

MFRTKRSALVRRLLWRSRAPGGEDEEEAGGGGGGGELRGEGATDSRAHGAGGGGPRAGCCCLGKAVRGAK
 GHHHPHPAAGAGAAGGAEADLKALTHSVLKKLKERQLELLQAVESRGGTRTACLLPGRLDCRLGPGA
 PAGAQAQPPSSYSPLLLLCKVFRWDLRHSSEVKRLCCCESYGKINPELVCCNPHHLRSLCELESPPPP
 YSRYPMDFLKPTADCPDVPSSAETGGTNYLAPGGLSDSQLLEPGDRSHWCVVAYWEEKTRVGRLYCVQ
 EPSLDIFYDLPPQNGFCLGQLNSDNKSQLVQKVRKIGCGIQLTREVDGVWVYNRSSYPIFKSATLDNP
 DSRTLLVHKVFPFGFSIKAFDYEKAYSLQRPNDHEFMQQPWTGFTVQISFVKGWGQCYTRQFISSCPCWLE
 VIFNSR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mg3171_c01.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_005904

ORF Size: 1278 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_005904.3](#)

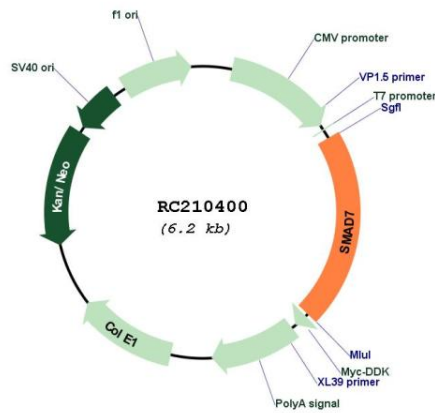
RefSeq Size: 3103 bp

RefSeq ORF: 1281 bp

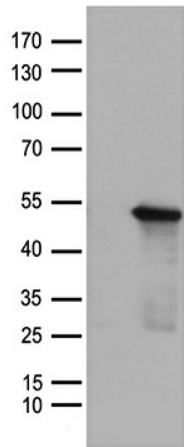
Locus ID: 4092

UniProt ID:	O15105
Cytogenetics:	18q21.1
Domains:	DWB, DWA, MH1
Protein Families:	Druggable Genome, Transcription Factors
Protein Pathways:	TGF-beta signaling pathway
MW:	46.2 kDa
Gene Summary:	The protein encoded by this gene is a nuclear protein that binds the E3 ubiquitin ligase SMURF2. Upon binding, this complex translocates to the cytoplasm, where it interacts with TGF-beta receptor type-1 (TGFBR1), leading to the degradation of both the encoded protein and TGFBR1. Expression of this gene is induced by TGFBR1. Variations in this gene are a cause of susceptibility to colorectal cancer type 3 (CRCS3). Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jun 2010]

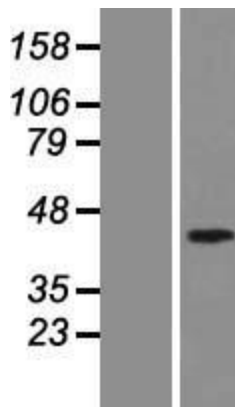
Product images:



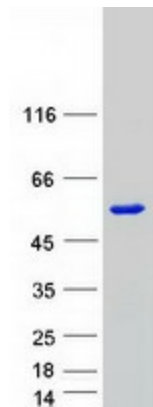
Circular map for RC210400



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SMAD7 (Cat# RC210400, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SMAD7 antibody (Cat# [TA890026]). Positive lysates [LY416991] (100ug) and [LC416991] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY416991]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210400 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SMAD7 protein (Cat# [TP310400]). The protein was produced from HEK293T cells transfected with SMAD7 cDNA clone (Cat# RC210400) using MegaTran 2.0 (Cat# [TT210002]).