

Product datasheet for **RC201418**

CCM2 (NM_031443) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CCM2 (NM_031443) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CCM2
Synonyms:	C7orf22; OSM; PP10187
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC201418 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGAAGAGGAGGCAAGAAGGGCAAGAAGCCTGGAATTGTCTCGCCATTTAAACGAGTATTCCTAAAAG
 GTGAAAAGAGTAGAGATAAGAAAAGCCCATGAGAAGGTGACAGAGAGGCGCCCTCTGCACACTGTGGTGTT
 GTCATTGCCTGAGCGCGTCGAGCCAGACAGACTGCTGAGCGACTATATTGAGAAGGAGGTAAGTATTTA
 GGTCAAGTAACTCCATACCAGGATACCTGAATCCCTCCAGTAGGACTGAAATCCTGCATTTTCATAGACA
 ATGCAAAGAGAGCCACCAGCTTCCGGGACACTTGACTCAGGAGCAGATGCTGTGCTCAGCCTGTCTGC
 GTACAACGTCAAGCTGGCTGGAGGGACGGGAGGATATCATCCTCAGGGTGCCCATCCATGACATCGCC
 GCCGTCTCCTATGTTCCGGATGACGCTGCACACCTGGTGGTCTGAAGACAGCCAGGACCCAGGGATCT
 CCCCAGCCAGAGTCTGTGTGCGGAAAGTTCCAGAGGCCCTCAGTGCAGGCTCCCTGTCGGAGAGTGCAGT
 TGGGCCCTGGAGGCATGCTGCCTGGTATCCTGGCTGCAGAGAGCAAGGTCGCTCGGAGGAGCTTTGC
 TGCTGTAGGCCAGGCTTCCAGGTTGTTACACGGAGTCCACCATCGACTTTCTGGACAGAGCGATAT
 TTGATGGGGCCTCTACCCGACCCACCCTGTCCCTGCACAGCGATGACTCTTCTACAAAAGTGGACAT
 TAAGGAGACCTACGAGGTGGAAGCCAGCACTTTCTGCTTCCCTGAATCTGTGGATGTGGTGGTGCATCA
 CCCACAGCAAGACCATCAGTGAGAGCGAGCTGAGCGCCAGCGCCACTGAGCTGCTGCAGGACTACATGC
 TGACGCTGCGCACCAAGCTGTATCACAGGAGATCCAGCAGTTTGCAGCACTGCTGCACGAGTACCGCAA
 TGGGGCCTCTATCCACGAGTTCTGCATCAACCTGCGGCAGCTCTACGGGACAGCCGCAAGTTCTGCTG
 CTTGGTCTGAGGCCCTTCATCCCTGAGAAGGACAGCCAGCACTTGCAGAACTTCTGGAGACCATTGGCG
 TGAAGGATGGCCGCGCATCATCACTGACAGCTTTGGCAGGCACCGCGGGCCCTGAGACCACATCCAG
 TTCCACCACCAATGGGAACAGGGCCACGGGCAGCTCTGATGACCGGTCGGCACCCCTCAGAGGGGGATGAG
 TGGGACCGCATGATCTCGGACATCAGCAGCGACATTGAGGCGCTGGGCTGCAGCATGGACCAGGACTCAG
 CA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC201418 protein sequence
 Red=Cloning site Green=Tags(s)

MEEEGKKGKPGIVSPFKRVFLKGEKSRDKKAHEKVTERPLHTVVLSPERVEPDRLLSDYIEKEVKYL
 GQLTSIPGYLNPSRTEILHFIDNAKRAHQLPGHLTQEHDVLSL SAYNVKLAWRDGEDILRVPIHDIA
 AVSYVRDDAAHLVVLKTAQDPGISPSQSLCAESSRGLSAGSLSESAVGPVEACCLVILAAESKVAEEELC
 CLLGQVFQVYTESTIDFLDRAIFDGASTPTHHLSLHSDSSTKVDIKETYEVEASTFCFPESVDVGGAS
 PHSKTISESELSASATELLQDYMLTLRKLSSQEIQQFAALLHEYRNGASIEHFCINLRQLYGDSRKFL
 LGLRPFIPKDSQHFENFLETIGVKDGRGIITDSFGRHRRALSTTSSTTNGNRATGSSDDRSAPSEGDE
 WDRMISDISSDIEALGCSMDQDSA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6395_e04.zip

Restriction Sites:

Sgfl-Mlul

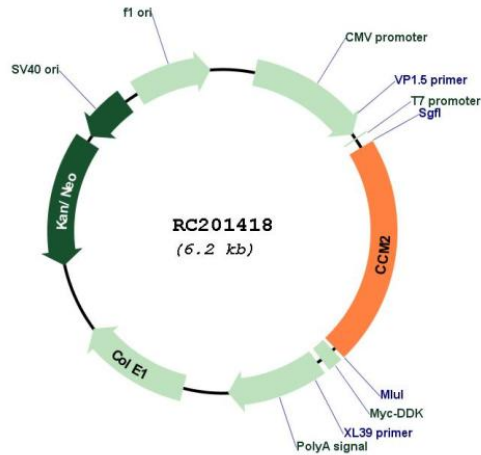
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_031443

ORF Size: 1332 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_031443.4](#)

RefSeq Size: 1904 bp

RefSeq ORF: 1335 bp

Locus ID: 83605

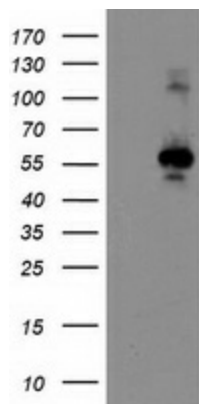
UniProt ID: [Q9BSQ5](#)

Cytogenetics: 7p13

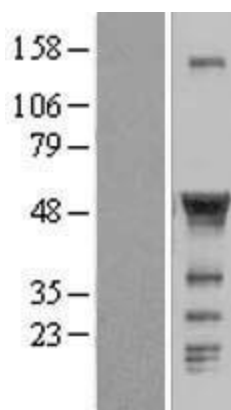
MW: 48.8 kDa

Gene Summary: This gene encodes a scaffold protein that functions in the stress-activated p38 Mitogen-activated protein kinase (MAPK) signaling cascade. The protein interacts with SMAD specific E3 ubiquitin protein ligase 1 (also known as SMURF1) via a phosphotyrosine binding domain to promote RhoA degradation. The protein is required for normal cytoskeletal structure, cell-cell interactions, and lumen formation in endothelial cells. Mutations in this gene result in cerebral cavernous malformations. Multiple transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Nov 2009]

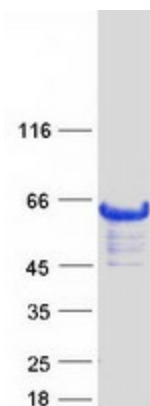
Product images:



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CCM2 (Cat# RC201418, 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-CCM2 (Cat# [TA503417]). Positive lysates [LY410516] (100ug) and [LC410516] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY410516]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201418 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CCM2 protein (Cat# [TP301418]). The protein was produced from HEK293T cells transfected with CCM2 cDNA clone (Cat# RC201418) using MegaTran 2.0 (Cat# [TT210002]).