OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MR231669

Smc2 (NM_001301412) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Smc2 (NM_001301412) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Smc2
Synonyms:	5730502P04Rik; AI255214; AW545314; CAP; CAP-E; CAPE; Fin; Fin16; SMC-2; Smc2l1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR231669 representing NM_001301412
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTATGTTAAATCAATCATTCTCGAAGGATTCAAGTCCTATGCACAGAGGACTGAAGTCAATGGTTTTG
ACCCCCTCTTCAATGCGATCACTGGTTTAAATGGTAGTGGAAAATCCAACATATTGGACTCCATATGCTT
TCTCCTAGGCATCTCCAACCTGTCCCAGGTGCGGGCTTCAAATTTACAAGATCTCGTTTATAAAAATGGA
CAGGCTGGGATTACCAAAGCCTCTGTTTCAATCACTTTTGATAATTCTGACAAAAAGCAGAGTCCGTTGG
GATTTGAAGCTCATGATGAAATCACAGTAACAAGACAGGTGGTTATTGGTGGCAGAAATAAATACTTAAT
CAATGGAGTGAATGCCAACAACACCAGAGTCCAAGATCTCTTTTGTTCTGTGGGCCTGAATGTTAACAAC
CCTCACTTTCTCATCATGCAGGGCAGAATTACGAAAGTATTAAATATGAAACCACCAGAGATATTATCCA
TGATTGAAGAAGCTGCTGGAACCAGGATGTATGAGTACAAAAAAATAGCCGCCCAGAAAACTATAGAAAA
AAAGGAGGCTAAGCTGAAAGAAATAAAAACGATACTGGAAGAAGAGATTACTCCAACGATTCAAAAATTA
AAAGAGGAAAGATCTTCTTACTTGGAGTACCAGAAAGTAATGCGGGAGATAGAGCATCTGAGTCGTTTAT
ACATTGCCTATCAGTTTTTGCGGGCTGAAGACACCAAGGAACGCTCAGCTGGGGAGCTAAAGGAAATGCA
GGATAAAATAGTAAATCTTCAAGAAGTACTGTCAGAGAATGAAAAAAAAAATAAAGGCTCTCAATTGTGAA
ATCGAAGAATTGGAGAGAAGAAAAGATAAGGAAACTGGAGGCAAACTCAAGTCTCTAGAGGATGCTTGTG
CAGAAGCCCAGCGAGTTAATACTAAGTCTCAAAGTGCATTTGACCTCAAGAAGAAAAACCTAGCTAGTGA
AGAAACCAAGCGCAAAGAGCTACAAAACAGTATGGCTGAGGATTCTAAAGCATTAGCAGCAAAGGAAAAA
GAAGTTAAGAAGATAACAGATGGACTGCATGGCCTTCAAGAAGCAAGCAATAAAGATGCTGAAGCTTTGG
CTGCTGCACAGCAGCACTTCAATGCTGTTTCTGCTGGCTTGTCCAGTAACGAAGATGGAGCAGAAGCAAC
TCTGGCTGGGCAGATGATAGCCTGTAAAAACGATATCAGCAAAGCTCAGACTGAGGCCAAGCAGGCTCAG
ATGAAGCTGAAACATGCCCAACAAGAACTAAAGAGTAAGCAAGCAGAGGTTAAGAAGATGGACAGTGGCT
ACAAGAAGGATCAAGACGCTTTTGAAGCTGTGAAAAAAGCTAAAGAAAAACTTGAAACTGAAATGAAGAA
GCTAAATTACGAAGAAAACAAAGAGGAAAAGCTTTTGGAAAAGCACAGGCAGCTGTCCCGTGACATCAAC

View online »

AACCTAAAAGGAAAACATGAAGCTCTCTTGGCCAAGTTTCCCAATCTTCAATTTGCATACAAGGACCCAG
AGAAGAACTGGAATCGAAATTCTGTGAAAGGACTTGTAGCTTCTCTGATAAATGTGAAAGATAATTCTAC
AGCCACAGCTCTGGAAGTGGTGGCTGGGGAACGACTCTACAATGTTGTAGTAGACACAGAGGTAACTGCT
AAGAAGCTACTAGAAAAGGGGGAGTTGAAGCGTCGATACACAATAATTCCTCTCAATAAGATTTCAGCCA
GATGTATTGCTCCTGAAACTCTGAGGGTCGCTCAGAATCTTGTTGGTCCTGACAATGTTCATGTAGCTCT
TTCCTTGGTTGACTATAAACCAGAACTTCAGAAAGGAATGGAATTTGTCTTTGGAACAACATTTGTTTGT
AACAATATGGATAATGCCAAAAAAGTGGCCTTTGATAAAAGGATAATGACCAGAACTGTAACCCTTGGGG
GTGATGTATTTGATCCTCATGGAACATTGAGTGGAGGTGCTAGGTCCCAGGCAGCTTCGATTTTAACCAA
GTTTCAAGAAGTCAAAGATGTTCAAGATGAGCTGAGGACCAAGGAGAATGAACTGCGCGCTCTAGAAGAG
GAGTTAGCAGGTCTTAAAAATGTTGCTGAAAAGTATCGCCAACTGAAACAGCAGTGGGAGATGAAGACAG
AGGAGGGAGACTTATTGCAAACTAAACTTCAGCAAAGCTCTTATCATAAGCAACAAGAAGAATTAGATGC
CCTTAAAAAAACCATTGAGGAAAGTGAGGAGACATTAAAAAGCACAAAAGAAATCCAAAAGAAAGCTGAA
GAAAAGTATGAAGCATTGGAGAATAAAATGAAAAATGCGGAAGCTGAAAGAGAGAAAGAACTGAAGGATG
CTCAGAAAAAACTAGATTGTGCCAAAACAAAGGCAGATGCATCTAGCAAGAAAATGAAAGAAAAACAACA
GGAGGTTGAAGCTATTACTCTAGAGCTGGAGGAGCTCAAAAGAGAGCATGCTTCTAATGAGCAGCAGCTT
GATGCCGTGAATGAAGCCATCAAAGCCTATGAAGGTCAGATTGAAAAAATGGCAGCTGAGGTCGCTAAAA
ATAAGGAATCAGTAAATAAAGCTCAAGACGAGCTGATGAAGCAAAAGCAAATAATAACAGCCCAGGACAA
CATAATTAAAGATAAATGTGCAGAAGTGGCGAAACACAATTTGCAAAACAATGAGTCTCAACTTAAAATT
AAGGAGTTGGACCACAGCATAAGCAAACATAAGCGGGAAGCGGATGATGCTGCTGCAAAGGTATCCAAAA
TGTTAAGTGATTATGATTGGATTAATGCTGAGAAACACCTATTTGGCCAACCTAATAGTGCCTATGATTT
CAAAACAAACAACCCCAAAGAAGCTGGCCAGAGACTTCAGAAGTTACAGGAAGTAAAAGAGAAACTAGGG
AGAAATGTCAACCTGAGAGCTATGAACGTGCTGACAGAAGCTGAAGAGCGGTATAATGATTTGATGAAGA
AGAAAAGAATTGTAGAAAATGACAAATCCAAAATCCTTGCAACTATAGAAGATCTTGACCAGAAGAAAAA
CCAGGCCCTAAATATTGCTTGGCAAAAGGTGAACAAAGACTTTGGCTCTATTTTTTCTACCCTTTTGCCT
GGTGCCAATGCTATGCTTGCACCACCAGAAGGGCAGACAGTTTTAGATGGTCTGGAGTTCAAGGTTGCCT
TAGGAAATACGTGGAAAGAAAACCTAACTGAGCTTAGTGGTGGTCAGAGGTCTCTAGTGGCTCTCTCACT
AATATTGTCCATGCTCCTCTTCAAACCTGCTCCAATTTATATCTTGGATGAGGTGGATGCGGCCTTGGAT
CTTTCTCATACCCAGAATATTGGGCAGATGCTGCGGACTCACTTCACACATTCTCAATTCATTGTGGTAT
CCCTCAAAGAAGGTATGTTCAACAATGCAAACGTTCTCTTCAAAACCAAGTTTGTGGATGGTGTTTCTAC
AGTAGCCAGATTTACGCAGAGTCAAGCTGGGAAGATTCCGAAGGAAGCAAAGTCCAGAGGAAAAGAACCC
AAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

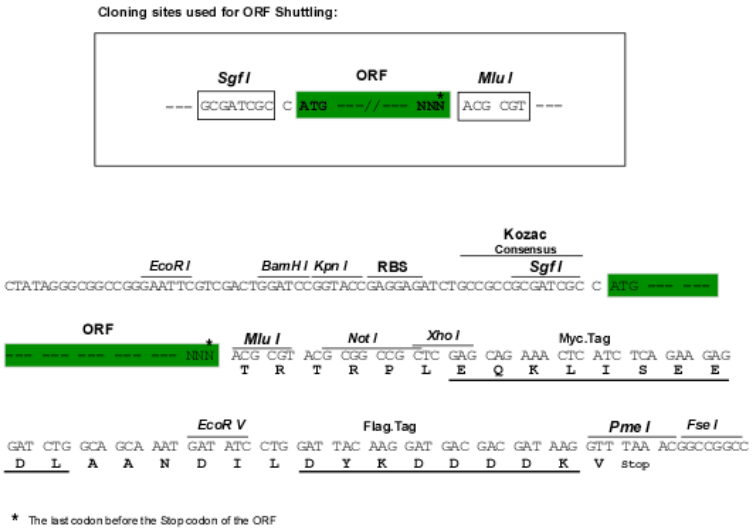
>MR231669 representing NM_001301412
Red=Cloning site Green=Tags(s)

MYVKSIILEGFKSYAQRTEVNGFDPLFNAITGLNGSGKSNILDSICFLLGISNLSQVRASNLQDLVYKNG
QAGITKASVSITFDNSDKKQSPLGFEAHDEITVTRQVVIGGRNKYLINGVNANNTRVQDLFCSVGLNVNN
PHFLIMQGRITKVLNMKPPEILSMIEEAAGTRMYEYKKIAAQKTIEKKEAKLKEIKTILEEEITPTIQKL
KEERSSYLEYQKVMREIEHLSRLYIAYQFLRAEDTKERSAGELKEMQDKIVNLQEVLSENEKKIKALNCE
IEELERRKDKETGGKLKSLEDACAEAQRVNTKSQSAFDLKKKNLASEETKRKELQNSMAEDSKALAAKEK
EVKKITDGLHGLQEASNKDAEALAAAQQHFNAVSAGLSSNEDGAEATLAGQMIACKNDISKAQTEAKQAQ
MKLKHAQQELKSKQAEVKKMDSGYKKDQDAFEAVKKAKEKLETEMKKLNYEENKEEKLLEKHRQLSRDIN
NLKGKHEALLAKFPNLQFAYKDPEKNWNRNSVKGLVASLINVKDNSTATALEVVAGERLYNVVVDTEVTA
KKLLEKGELKRRYTIIPLNKISARCIAPETLRVAQNLVGPDNVHVALSLVDYKPELQKGMEFVFGTTFVC
NNMDNAKKVAFDKRIMTRTVTLGGDVFDPHGTLSGGARSQAASILTKFQEVKDVQDELRTKENELRALEE
ELAGLKNVAEKYRQLKQQWEMKTEEGDLLQTKLQQSSYHKQQEELDALKKTIEESEETLKSTKEIQKKAE
EKYEALENKMKNAEAEREKELKDAQKKLDCAKTKADASSKKMKEKQQEVEAITLELEELKREHASNEQQL
DAVNEAIKAYEGQIEKMAAEVAKNKESVNKAQDELMKQKQIITAQDNIIKDKCAEVAKHNLQNNESQLKI
KELDHSISKHKREADDAAAKVSKMLSDYDWINAEKHLFGQPNSAYDFKTNNPKEAGQRLQKLQEVKEKLG
RNVNLRAMNVLTEAEERYNDLMKKKRIVENDKSKILATIEDLDQKKNQALNIAWQKVNKDFGSIFSTLLP
GANAMLAPPEGQTVLDGLEFKVALGNTWKENLTELSGGQRSLVALSLILSMLLFKPAPIYILDEVDAALD
LSHTQNIGQMLRTHFTHSQFIVVSLKEGMFNNANVLFKTKFVDGVSTVARFTQSQAGKIPKEAKSRGKEP
N

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:

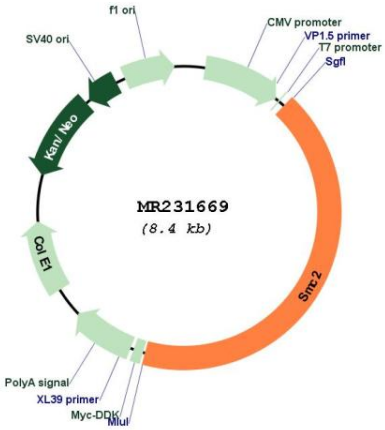


ACCN: NM_001301412

ORF Size: 3573 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_001301412.1, NP_001288341.1
RefSeq Size:	5531 bp
RefSeq ORF:	3576 bp
Locus ID:	14211
UniProt ID:	Q8CG48
Cytogenetics:	4 28.31 cM
MW:	134.2 kDa
Gene Summary:	The protein encoded by this gene is a component of both condensin I and condensin II complexes, and forms a heterodimer with structural maintenance of chromosome 4 (Smc4). This heterodimer is the catalytic subunit for both condensin complexes, and is involved in several processes, including chromosome condensation during mitosis and meiosis, cohesin removal during mitosis and meiosis, and single-strand break (SSB) repair. Reduced expression of this gene results in chromosome segregation defects during mitosis and meiosis, with a more severe defect observed in embryonic stem cells. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2014]

Product images:



Circular map for MR231669