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 SC116125

SMC2 (NM_006444) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SMC2 (NM_006444) Human Untagged Clone
Tag:	Tag Free
Symbol:	SMC2
Synonyms:	CAP-E; CAPE; SMC-2; SMC2L1
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC116125 sequence for NM_006444 edited (data generated by NextGen Sequencing)

ATGCATATTAAGTCAATTATTCTAGAGGGATTCAAGTCCTATGCTCAGAGGACCGAAGTC
AATGGTTTTGACCCCCTCTTCAATGCTATCACTGGCTTAAATGGTAGTGGGAAATCCAAC
ATATTGGACTCCATCTGCTTTTTGCTGGGCATCTCCAACCTGTCTCAGGTTCGGGCTTCT
AATTTACAAGATTTAGTTTACAAAAATGGGCAGGCTGGTATTACCAAAGCCTCTGTGTCA
ATCACTTTTGATAATTCTGACAAAAAGCAAAGTCCTTTAGGATTTGAGGTTCATGATGAA
ATCACAGTAACAAGGCAGGTGGTTATTGGTGGTAGAAATAAATATTTAATCAATGGAGTC
AATGCCAACAACACCAGAGTACAGGATCTCTTCTGTTCTGTTGGCCTTAATGTTAACAAC
CCTCACTTTCTCATCATGCAGGGCCGAATTACAAAAGTATTGAATATGAAACCTCCAGAG
ATTTTATCCATGATAGAAGAAGCAGCTGGAACCAGGATGTATGAATACAAAAAAATAGCT
GCACAGAAAACTATAGAAAAAAAGGAGGCTAAGCTGAAAGAAATTAAGACGATACTTGAA
GAAGAGATTACTCCAACCATTCAAAAATTAAAAGAGGAAAGATCGTCCTACTTGGAGTAC
CAAAAAGTAATGAGAGAAATAGAACATTTGAGTCGTTTATATATTGCTTATCAGTTTTTG
CTGGCTGAAGATACCAAAGTACGCTCAGCTGAGGAATTAAAAGAAATGCAAGATAAAGTT
ATAAAGCTTCAGGAAGAATTGTCTGAGAATGATAAAAAAATAAAAGCACTTAATCATGAA
ATAGAAGAATTGGAAAAAAGAAAAGATAAGGAAACTGGAGGTATACTTCGATCTTTAGAA
GATGCTCTTGCAGAGGCTCAGCGAGTTAATACTAAATCTCAAAGCGCATTTGATCTCAAG
AAGAAAAATCTGGCATGTGAGGAAAGCAAACGCAAAGAGCTGGAAAAAAATATGGTTGAG
GACTCAAAAACTTTAGCAGCAAAGGAAAAAGAGGTTAAAAAGATAACAGATGGACTGCAT
GCCCTTCAAGAAGCAAGTAATAAAGATGCTGAAGCTCTGGCAGCTGCACAGCAGCACTTC
AATGCTGTTTCCGCTGGCCTGTCCAGTAATGAAGATGGAGCAGAAGCAACTCTTGCTGGT
CAAATGATGGCCTGTAAAAATGATATAAGTAAAGCTCAGACAGAAGCCAAACAGGCTCAG
ATGAAGTTGAAGCATGCTCAACAGGAATTAAAGAATAAACAAGCTGAAGTTAAGAAGATG
GATAGTGGCTACAGGAAGGATCAAGAAGCTCTAGAAGCTGTAAAAAGACTTAAAGAAAAA
CTTGAAGCTGAAATGAAAAAGCTAAATTATGAAGAAAATAAAGAGGAAAGCCTTTTGGAA
AAGCGCAGGCAGCTGTCTCGTGATATTGGTAGATTGAAAGAAACATATGAAGCTCTATTA

View online »

GCCAGATTTCCCAATCTTCGATTTGCATACAAGGATCCAGAGAAGAACTGGAATAGAAAT
TGTGTGAAAGGACTTGTGGCTTCTCTGATTAGTGTGAAAGACACTTCTGCAACCACAGCT
TTAGAATTAGTGGCTGGAGAACGACTCTACAATGTTGTAGTAGACACAGAAGTTACTGGT
AAAAAGCTACTAGAAAGGGGGGAACTGAAACGTCGATACACTATAATTCCACTCAATAAA
ATTTCAGCCAGATGTATTGCACCAGAAACTCTGAGAGTTGCTCAGAATCTTGTTGGCCCT
GACAACGTTCATGTGGCTCTTTCCTTGGTTGAATATAAACCAGAACTTCAGAAAGCAATG
GAGTTTGTCTTTGGAACAACATTTGTTTGTGACAATATGGATAATGCCAAAAAAGTGGCC
TTTGATAAGAGGATAATGACTAGAACTGTAACTCTCGGAGGTGATGTGTTTGATCCTCAT
GGGACATTGAGTGGAGGTGCTCGATCCCAGGCAGCTTCCATTTTAACCAAGTTTCAAGAA
CTCAAAGATGTTCAGGATGAACTGAGAATCAAAGAGAATGAGCTGCGGGCTCTAGAAGAG
GAATTAGCAGGTCTTAAAAACACTGCTGAAAAGTATCGCCAACTAAAACAGCAGTGGGAG
ATGAAAACTGAAGAGGCAGATTTATTACAAACCAAGCTCCAGCAAAGCTCATATCACAAG
CAACAAGAAGAATTAGATGCCCTTAAAAAAACCATTGAGGAAAGTGAGGAGACTTTGAAA
AACACTAAAGAAATCCAAAGAAAAGCAGAAGAAAAATATGAAGTATTGGAAAATAAAATG
AAAAATGCAGAAGCTGAAAGAGAGCGAGAACTGAAAGATGCTCAGAAAAAACTGGATTGT
GCCAAAACAAAGGCAGATGCATCTAGCAAGAAGATGAAAGAAAAACAACAGGAAGTTGAA
GCTATCACTCTGGAACTGGAAGAGCTCAAGAGAGAGCATACATCTTACAAACAACAGCTT
GAAGCTGTAAATGAAGCTATCAAATCCTATGAAAGTCAGATTGAAGTAATGGCAGCTGAG
GTGGCTAAAAATAAGGAGTCAGTAAATAAAGCTCAAGAAGAGGTGACCAAGCAAAAAGAG
GTGATAACAGCCCAAGACACTGTAATTAAAGCTAAATATGCAGAAGTGGCAAAACACAAG
GAGCAAAACAATGATTCTCAGCTTAAAATTAAGGAATTAGACCACAACATCAGCAAACAT
AAACGGGAGGCTGAAGATGGTGCTGCAAAGGTATCCAAAATGTTGAAAGATTATGACTGG
ATTAATGCAGAGAGACACCTCTTTGGCCAACCCAATAGTGCCTATGATTTCAAAACTAAC
AACCCTAAAGAAGCTGGTCAGAGACTTCAGAAGTTGCAAGAAATGAAGGAGAAACTAGGA
AGAAATGTCAATATGAGAGCTATGAATGTATTGACAGAAGCTGAAGAGCGATACAATGAC
TTGATGAAGAAGAAGAGAATTGTAGAAAATGACAAATCCAAAATTCTTACAACTATAGAA
GACCTTGACCAGAAGAAAAACCAAGCCCTAAATATTGCATGGCAAAAGGTGAACAAGGAC
TTTGGGTCTATTTTTTCTACTCTTTTGCCTGGTGCTAATGCTATGCTTGCACCACCAGAG
GGTCAAACTGTTTTGGATGGTCTGGAGTTCAAGGTTGCCTTAGGAAATACCTGGAAAGAA
AACCTAACTGAACTTAGTGGTGGTCAGAGGTCTTTAGTGGCCTTGTCATTAATACTGTCC
ATGCTTCTCTTCAAACCTGCTCCAATTTATATCCTTGATGAGGTAGATGCAGCCTTGGAT
CTTTCTCATACCCAAAACATTGGACAGATGCTGCGTACTCATTTCACACATTCTCAGTTC
ATTGTGGTGTCACTAAAAGAAGGTATGTTCAACAATGCAAACGTTCTTTTCAAAACCAAG
TTTGTGGATGGTGTTTCTACAGTAGCCAGATTTACTCAATGTCAAAATGGAAAGATTTCA
AAGGAAGCAAAATCCAAGGCAAAACCACCCAAAGGAGCACATGTGGAAGTTTAA

Clone variation with respect to NM_006444.2
3222 g=>a

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_006444 unedited
TCACTATAGGGCGGCCGCGAATTCGGCACGAGGGCGGGTGTTGAGAGCGGTGTGGTAGGT
GTTGTAGCCGCTATGGTGAAGTTCGCTTTGTAGCGGCCCCGGCTAGAGAGTTGGCCTGTT
CCCTGCCTTTGTGACCCGGAGGAGCTTTTGGGGTGCGTCAAGCCCCTGGCCTGAGGCAGC
GGTGAGGCGTAACTGGTTTGTGGCCTGTTTGATTCCTGTCAGAGGTTTGCTGACCCAAGA
CAGTATCGAAAATGCATATTAAGTCAATTATTCTAGAGGGATTCAAGTCCTATGCTCAGA
GGACCGAAGTCAATGGTTTTGACCCCCTCTTCAATGCTATCACTGGCTTAAATGGTAGTG
GGAAATCCAACATATTGGACTCCATCTGCTTTTTGCTGGGCATCTCCAACCTGTCTCAGG
TTCGGGCTTCTAATTTACAAGATTTAGTTTACAAAAATGGGCAGGCTGGTATTACCAAAG
CCTCTGTGTCAATCACTTTTGATAATTCTGACAAAAAGCANAGTCCTTTAGGATTTGAGG
TTCATGATGAAATCACAGTAACAAGGCAGGTGGTTATTGGTGGTAGAAATAAATATTTAA
TCAATGGAGTCAATGCCCAACACACCAGAGTACAGGATCTCTTCTGTTCTGGTGGCCTTA
ATGNNTACANCCCTCACTTTCTCATCATGCAGGGCCCCGATTACANAAGTATTGAATATG
AAACCTCCAGAGATTTATCCATGATAGAAGAAGCAGCTGGAACCAGNATGTATGAATACA
NNAAATAGCTGCCCAGAAAACTATAGAAAAAAAGAGGCTAAGCTGAAAGAAATTAGNACG
ATACTTGGAGAAGAAATACCTCCANCCATTCANAANNTAAAGAGGANNGACGTNCTACCT
GGAGTACCAAAAAGTATGGAAGAATTAAGACATTTGNGNCCGTNATATATGGCTTATAAG
TTTTTGCTGGCTGAAAAAACCCAAGTCGCTCAGCTGAAGAATTAAANGAATGCAGAAAAA
TN

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_006444 unedited
GGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
TTTTTTTACATTAATCATGGAATTTAATCTGCTTTTTTGTATATTAGCTTTTACATATAA
AATCGGGTATTTCAGGATCCCTAATTTTTAAAAGACCCGCATAAAAAAAAAACATTTGAT
GATTTGCATAAAATCACAACCCCAATATTTGGCCCTTATTTAGACTAGTTAAGAGATGAG
GAATTTTTGCTCATTTGTAAGCGATAAGGGATTATTTAAAGAAAAAACATGGGTTAAGTA
ACACAGTAACATTAATTTTTGTATATAAACAAATTAGTTATTTCAAGTCCTTAAAAGTTT
ACATTTAAAAAAACAGGTCAAGATGAAAAAATAACTTTGGAGTTTAAACTTCCACATGGG
CTCCTTTGGGGGGTTTTGCCTTGGATTTTGCTTCCTTTGAAATCTTTCCATTTTGACATT
GAGTAAATCTGGCTACTGGAAAAACACCATCCACAAACTTGGTTTTGAAAAAAACGTTTG
CATTGTTGAACATACCTTCTTTTAGGGACACCACAATGAACTGAGAATGTGTGAAATGAG
TACGCACCATTTGTCCAATGTTTTGGGTATGAGAAAGATCCAAGGCTGCATCTACCTCAT
CAAGAATATAAATTGGAGCAGGTTTGAAGAGAACCATGGACAGTATTAATGACAGGCCCC
TTAAAGACCTCTGACACCACTAAGNTCAGTTAGGTTTTTTTTCTCACGTATTTCCTAAGG
AACCTTTGACTCCAAACCATCCAAAACAGTTTGACCCCTTGGGGGTGGCAGCATTACCTT
AACCCCGGGCAAAGAGTTGAAAAAAAGCACCCAAGTCCTGTCACCTTTTGCTGCATTATT
AAGGCGTGGTTTTCTTTGGNCAGGTCTTTTATAGTGAAGAATTGGATTGCATTCTTCCAA
TCT

Restriction Sites: NotI-NotI

ACCN: NM_006444

Insert Size: 4000 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_006444.1, NP_006435.1
RefSeq Size:	4166 bp
RefSeq ORF:	3594 bp
Locus ID:	10592
UniProt ID:	O95347
Cytogenetics:	9q31.1
Domains:	SMC_N, SMC_C
Protein Families:	Druggable Genome
Gene Summary:	Central component of the condensin complex, a complex required for conversion of interphase chromatin into mitotic-like condense chromosomes. The condensin complex probably introduces positive supercoils into relaxed DNA in the presence of type I topoisomerases and converts nicked DNA into positive knotted forms in the presence of type II topoisomerases.[UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (3) differs in the 5' UTR, compared to variant 1. All variants encode the same protein.