

Product datasheet for **MC223874**

Smc2 (NM_008017) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Smc2 (NM_008017) Mouse Untagged Clone
Tag: Tag Free
Symbol: Smc2
Synonyms: 5730502P04Rik; AI255214; AW545314; CAP; CAP-E; CAPE; Fin; Fin16; SMC-2; Smc211
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
Fully Sequenced ORF: >MC223874 representing NM_008017
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGTATGTTAAATCAATCATTCTCGAAGGATTCAAGTCTATGCACAGAGGACTGAAGTCAATGGTTTTG
ACCCCTCTTCAATGCGATCACTGGTTTAAATGGTAGTGGAAAAATCCAACATATTGGACTCCATATGCTT
TCTCCTAGGCATCTCAACCTGTCCAGGTGCGGGCTTCAAATTTACAAGATCTCGTTTAAAAATGGA
CAGGCTGGGATTACCAAAGCCTCTGTTTCAATCACTTTTGATAATTCTGACAAAAAGCAGAGTCCGTGG
GATTTGAAGCTCATGATGAAATCACAGTAAACAAGACAGGTGGTTATTGGTGGCAGAAATAAATACTTAAT
CAATGGAGTGAATGCCAACACCAGAGTCCAAGATCTTTTTGTTCTGTGGCCTGAATGTTAACAAAC
CCTCACTTTCTCATGATGAGGGCAGAATTACGAAAGTATTAATATGAAACCACCAGAGATATTATCCA
TGATTGAAGAAGCTGCTGGAACCAGGATGTATGAGTACAAAAAATAGCCGCCAGAAAATATAGAAAA
AAAGGAGGCTAAGCTGAAAGAAAATAAAACGATACTGGAAGAAGAGATTACTCCAACGATCAAAAAATTA
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ACATTGCCTATCAGTTTTTGGGGCTGAAGACACCAAGGAACGCTCAGCTGGGGAGCTAAAGGAAATGCA
GGATAAAATAGTAAATCTTCAAGAAGTACTGTGAGAGAATGAAAAAATAAAGGCTCTCAATTGTGAA
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AGAAACCAAGCGCAAAGAGCTACAAAACAGTATGGCTGAGGATCTAAAGCATTAGCAGCAAAGGAAAA
GAAGTTAAGAAGATAACAGATGGACTGCATGGCCTTCAAGAAGCAAGCAATAAAGATGCTGAAGCTTTGG
CTGCTGCACAGCAGCACTTCAATGCTGTTTCTGCTGGCTGTCCAGTAAAGCAAGATGGAGCAGAAGCAAC
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AGAAGAACTGGAATCGAAATTCTGTGAAAGGACTTGTAGCTTCTCTGATAAATGTGAAAGATAATTCTAC
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AAGAAGCTACTAGAAAAGGGGAGTTGAAGCGTCGATACACAATAATTCCTCTCAATAAGATTTTCAGCCA
GATGTATTGCTCCTGAAACTCTGAGGGTCGCTCAGAATCTTGTGGTCTGACAATGTTTCATGTAGCTCT
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ACAATATGGATAATGCCAAAAAGTGGCTTTGATAAAAAGGATAATGACCAGAACTGTAAACCTTGGGG
GTGATGTATTGATCCTCATGGAACATTGAGTGGAGGTGCTAGGTCAGGCAGCTTCGATTTTAACCAA
GTTTCAAGAAGTCAAAGATGTTCAAGATGAGCTGAGGACCAAGGAGAATGAACTGCGCGCTCTAGAAGAG
GAGTTAGCAGGCTTAAAAATGTTGCTGAAAAAGTATCGCCAACCTGAAACAGCAGTGGGAGATGAAGACAG
AGGAGGGAGACTTATTGCAAACTAACTTCAGCAAAGCTCTTATCATAAGCAACAAGAAGAAATTAGATGC
CCTTAAAAAACCATGAGGAAAGTGGAGAGACTTAAAAAGCACAAAAGAAATCCAAAAGAAAGCTGAA
GAAAAGTATGAAGCATTGGAGAATAAATGAAAAATGCGGAAGCTGAAAGAGAGAAAAGAACTGAAGGATG
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GGAGGTTGAAGCTATTACTCTAGAGCTGGAGGAGCTCAAAGAGAGCATGCTTCTAATGAGCAGCAGCTT
GATGCCGTGAATGAAGCCATCAAAGCCTATGAAGGTCAGATTGAAAAAATGGCAGCTGAGGTCGCTAAAA
ATAAGGAATCAGTAAATAAGCTCAAGACGAGCTGATGAAGCAAAAGCAATAATAACAGCCAGGACAA
CATAATTAAGATAAATGTGCAGAAGTGGCGAAACACAATTTGCAAAAACATGAGTCTCAACTTAAAT
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TGTTAAGTGATTATGATTGGATTAATGCTGAGAAAACCTATTTGGCCAACCTAATAGTGCTATGATTT
CAAAACAAACAACCCCAAAGAAGCTGGCCAGAGACTTCAGAAGTTACAGGAAGTAAAAGAGAACTAGGG
AGAAATGTCAACCTGAGAGCTATGAACGTGCTGACAGAAGCTGAAGAGCGGTATAATGATTTGATGAAGA
AGAAAAGAATTGTAGAAAATGACAAATCCAAAATCCTTGCAACTATAGAAGATCTTGACCAGAAGAAAA
CCAGGCCCTAAATATTGCTTGGCAAAGGTGAACAAAGACTTTGGCTCTATTTTTCTACCTTTTGCCT
GGTGCCAAATGCTATGCTTGCACCACAGAAAGGCAGACAGTTTTAGATGGTCTGGAGTTCAAGGTTGCCT
TAGGAAATACGTGAAAGAAAACCTAAGTGAAGCTTGTGGTGGTTCAGAGGCTCTAGTGGCTCTCTCACT
AATATTGTCCATGCTCCTCTTCAAACCTGCTCCAATTTATATCTTGGATGAGGTGGATGCGGCCTTGGAT
CTTTCTCATACCCAGAATATTGGGCAGATGCTGCGGACTCACTTCACACATTCTCAATTCATTGTGGTAT
CCCTCAAAGAAGGTATGTTCAACAATGCAAACGTTCTCTTCAAACCAAGTTTGTGGATGGTGTCTAC
AGTAGCCAGATTTACGCAGAGTCAAGCTGGGAAGATTCCGAAGGAAGCAAAGTCCAGAGGAAAAGAACC
AACTGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:

SgfI-MluI

ACCN:

NM_008017

Insert Size:

3576 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_008017.4](#), [NP_032043.3](#)

RefSeq Size: 5455 bp

RefSeq ORF: 3576 bp

Locus ID: 14211

UniProt ID: [Q8CG48](#)

Cytogenetics: 4 28.31 cM

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]
Transcript Variant: This variant (2) differs in the 5' UTR compared to variant 1. Variants 1 and 2 encode the same protein.