

Product datasheet for **MG209400**

Smc5 (BC007174) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Smc5 (BC007174) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Smc5
Synonyms:	MGC30442, MGC7569, mKIAA0594
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG209400 representing BC007174
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGC**C

ATGAAAGATAATAAAATGCAAAATATGTTGAAAATCATATTTTCATCAAATGACTTAAGAGCCTTTGTGT
 TTGAAAGTCAAGAAGATATGGAGATTTTCTCAGAGAGGTTCTGTACAACAAGAAGTTAAGAGTAAATGC
 TGTATTGCCCCCAAGATCTCATGTGCAGACAAAGCCCTTCAAGATCTCTGAATGACTTAAACAAATAT
 GGATTTTTTTCATATCTTCGGGAGTTATTTGATGCACCTGATCCTGTGATGAGTTACCTTTGCTGCCAGT
 ATCATATTCATGAGGTTCTGTGGAACTGAAAGGACCCGAGAAAGAATTGAACGGGTAATACAAGAAAC
 TCGATTAACAAATTTATACAGCAGAAGAAAAGTATGTGTTAAAACTTCTGTGATTCAAATAAAGTT
 ATTTCTAGTAATACATCCCTGAAAGTAGCCAGTTCCTCACTGTTACTGTGGATCTAGAGCAAAGAAGAC
 ACTTGGAAGAGCAGCTAAAGGAAATGAATAGACAACCTGGAAGCAGTGGACTCAGGGTTGGCCACCTTGCG
 TGATACCAACAGGCACCTTGAGCTCAAAGACAACGAGTAAGGCTGAAGAAGAAGGAGCTTCTTGAAAGA
 AAAACCAGGAAAAAGCAGCTGGAGCAGAAAATCAGCTCCAAGCTGGCAAGTATAAGGCTGATGGAACAGG
 ATACTTGCAATCTGGAAGAGGAAGAACGAAAAGCAAGTACCAAAATAAAAGAAATAAATGTTTCAGAAAGC
 AAAACTTGTTACTGAATTAACAGGCCTTGTAAGATATGCACTTCTTTCAAATTCAAAAAGTTGATTTG
 ATTCTTCAAAATACTACAGTGATCTCTGAGAAGAAAGTTAGAAGCAGATTACATGGCGTCATCTTCCC
 AGCTACGCGTCACAGAACAACAATTCATTGAATTGGATGACAACAGACAGAGATTGTTACAGAAGTGCAA
 GGAAGTTATGAAGAAAGCTAGGCAAGTATGCAACCTGAGTGCTGACCAAGCTGTTCCACAAGAATTCAG
 ACACAAGTACCCACCATTCCAAATGGACACAGCTCCTCACCCCATGGCTTTTCAAGATCTCCCAACA
 CATTGGATGAAATCGATGCATTATTAAGTGAAGAAAGGTCAAGAGCTTCGTGCTTACAGGACTGAATCC
 TTCGGTGGTTGAGGAGTACTCAAAAAGAGAAGTAGAAATACAGCAGTTGACCGAAGAACTGCAGGGGAAG
 AAAGTTGAACTAGATGAATACAGGGAACATTTTCGAGGTGAAAGAAAGGTGGCTGAACCCCTTAAAGG
 AGCTAGTAGAAAAAATTAATGAGAAATTCAGCACTTTTTAGTTCCATGCAGTGTGCTGGTGAAGTTGA
 TCTTCATACAGAAATGAGGAAGATTATGATAAATATGGAATCCGATTAGAGTAAATTTTCGAGTAGT
 ACTCAGCTGCATGAATTAATCCTCATCATCAAAGTGGAGGTGAAAGAAGTGTCTACTATGCTATACT
 TGATGGCACTTCAGGAGCTTAACAGATGTCCTTCAGAGTAGTCGATGAAATTAACAGGTATGGACCC
 AATTAATGAACGGAGAGTATTTGAAATGGTTGTGAACACTGCCTGTAAGAGAACACATCCAGTATTTT
 TTCATCACACCGAAGCTTCTACAGAATCTCCTTATTCTGAAAAGATGACAGTATTGTTTGTCTACAATG
 GTCTCATATGCTGGAGCCAAACCGATGGAATTTAAAGGCTTTTCAAAGGCGTCGCGGAAGGATAACCTT
 TACTCAACCTCAG

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG209400 representing BC007174
 Red=Cloning site Green=Tags(s)

MKDKNKAYVENHISSNDLRAVFESQEDMEIFLREVRDNKKLRVNAVIAPKISCADKAPSRSLNDLKQY
 GFFSYLRELFADPDPVMSYLCCQYHIHEVPVGTERTRERIQUIETRLKQIYTAEEKYVLKTSVYSNKV
 ISSNTSLKVAQFLTVTVGLEQRRHLEEQLEKEMNRQLEAVDSGLATLRDNRHLELKDNLRLKKKELLER
 KTRKRQLEQKISSKLASIRLMEQDTCNLEEEERKASTKIKEINVQKAKLVTEL TGLVKICTSFQIQKVDL
 ILQNTTVISEKNKLEADYMASSSQLRVTEQQFIELDDNRQRLQKCKELMKKARQVCNL SADQAVPQEFQ
 TQVPTIPNGHSSPPMAFQDL PNTLDEIDALL TEERSRASCFTGLNPSVVEEYSKREVEIQQLTEELQGK
 KVELDEYRENISQVKERWLNPLKELVEKINEKFSNFFSSMQCAGEVDLHTENEEDYDKYGIRIRVKFRSS
 TQLHELTPHHQSGGERSVSTMLYLMALQELNRCFPRVVDINQGMPIINERRVFMVNTACKENTSQYF
 FITPKLLQNLPLYSEKMTVLFVYNGPHMLEPNRWNLKAFQRRRRRITFTQPQ

SGPTRRRLE – GFP Tag – V

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:


ACCN: BC007174

ORF Size: 1833 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: [BC007174](#), [AAH07174](#)

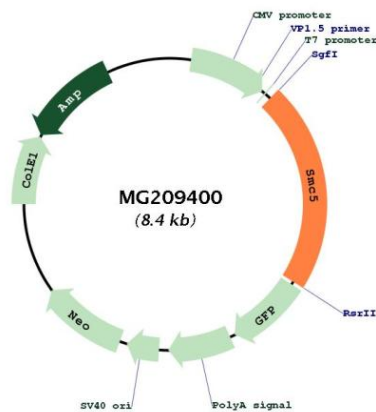
RefSeq Size: 3883 bp

RefSeq ORF: 1835 bp

Locus ID: 226026

Cytogenetics:	19 B
Gene Summary:	Core component of the SMC5-SMC6 complex, a complex involved in repair of DNA double-strand breaks by homologous recombination. The complex may promote sister chromatid homologous recombination by recruiting the SMC1-SMC3 cohesin complex to double-strand breaks. The complex is required for telomere maintenance via recombination and mediates sumoylation of shelterin complex (telosome) components. Required for sister chromatid cohesion during prometaphase and mitotic progression; the function seems to be independent of SMC6 (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG209400