

Product datasheet for **MG211783**

Smc2 (NM_008017) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Smc2 (NM_008017) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Smc2
Synonyms:	5730502P04Rik; AI255214; AW545314; CAP; CAP-E; CAPE; Fin; Fin16; SMC-2; Smc211
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG211783 representing NM_008017 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

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AAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG211783 representing NM_008017
 Red=Cloning site Green=Tags(s)

MYVKSIIIEGFKSYAQRTEVNGFDPLFNAITGLNGSGKSNILDSICFLLGISNLSQVRASNLQDLVYKNG
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 N

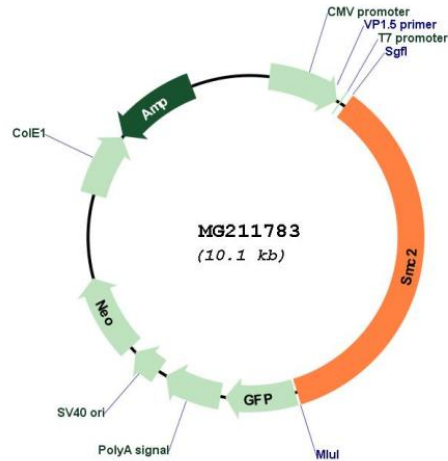
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_008017

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

RefSeq Size: 5337 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]