

## Product datasheet for **RG217661**

### SMC2 (NM\_006444) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SMC2 (NM_006444) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SMC2
Synonyms:	CAP-E; CAPE; SMC-2; SMC2L1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG217661 representing NM_006444 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCATATTAAGTCAATTATTCTAGAGGGATTCAAGTCCTATGCTCAGAGGACCGAAGTCAATGGTTTTG  
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CAATGGAGTCAATGCCAACACCAGAGTACAGGATCTCTTCTGTTCTGTTGGCCTTAATGTTAACAAAC  
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CACTAAAAGAAGGTATGTTCAACAATGCAAACGTTCTTTTCAAACCAAGTTTGTGGATGGTGTCTAC  
AGTAGCCAGATTTACTCAATGTCAAATGAAAGATTTCAAAGGAAGCAAAATCCAAGGCCAAAACCAACC  
AAAGGAGCACATGTGAAGTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG217661 representing NM\_006444  
 Red=Cloning site Green=Tags(s)

MHIKSIILEGFKSYAQRTEVNGFDPLFNAITGLNGSGKSNILDSICFLLGISNLSQVRASNLQDLVYKNG  
 QAGITKASVSITFDNSDKKQSPGLFEVHDEITVTRQVVIIGRNKYLINGVNANTRVQDLFCSVGLNVDN  
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 RNVNMRAMNVLTEAERYNDLMKKKRIVENDKSKILTTIEDLDQKKNQALNIAWQKVNKDFGSIFSTLLP  
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 KGAHVEV

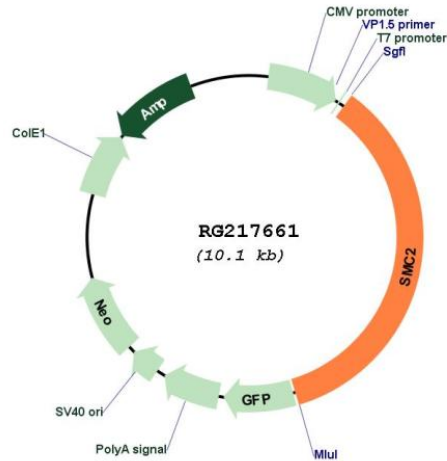
TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_006444

**ORF Size:** 3591 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\\_006444.3](#)

**RefSeq Size:** 5983 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]