

## Product datasheet for **RG231801**

### PSMC2 (NM\_001204453) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** PSMC2 (NM\_001204453) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** PSMC2  
**Synonyms:** MSS1; Nbla10058; RPT1; S7  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG231801 representing NM\_001204453  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCGGATTACCTCGGTGCCGATCAGCGGAAGACCAAAGAGGATGAGAAGGACGACAAGCCCATCCGAG  
CTCTGGATGAGGGGATATTGCCTTGTGAAAACCTATGGTCAGAGCACTTACTCTAGGCAGATCAAGCA  
AGTTGAAGATGACATTCAGCACTTCTCAAGAAAATTAATGAGCTCACTGGTATTAAGAATCTGACT  
GGCCTGGCCCCACCAGCACTCTGGGATTTGGCTGCAGATAAGCAGACACTCCAGAGTGAACAGCCTTAC  
AGTTGCCAGGTGTACAAAGATAATCAATGCTGATTCCGGAGGACCCAAAATACATTATCAACGTAAGCA  
GTTTGCCAAGTTTGTGGTGGACCTTAGTGATCAGGTGGCACCTACTGACATTGAAGAAGGGATGAGAGTG  
GGG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG231801 representing NM\_001204453  
Red=Cloning site Green=Tags(s)

MPDYLGADQRKTKEDKDDKPIRALDEGDIALLLKTYGQSTYSRQIKQVEDDIQQLLKKINELTGIKESDT  
GLAPPALWDLAADKQTLQSEQLQVARCTKIINADSEDPKYIINVKQFAKFVVDLSDQVAPT DIEEGMRV  
G

**TRTRPLE** - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

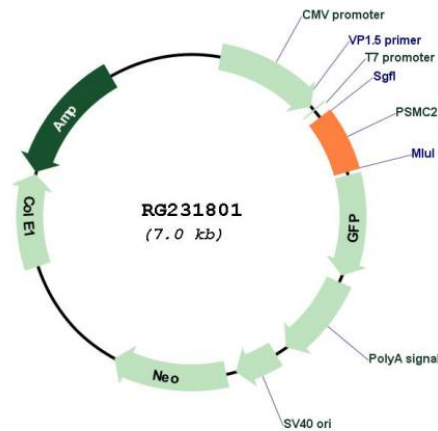


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Cloning Scheme:



Plasmid Map:



ACCN: NM\_001204453

ORF Size: 423 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.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_001204453.1, NP_001191382.1</u>
<b>RefSeq Size:</b>	989 bp
<b>RefSeq ORF:</b>	426 bp
<b>Locus ID:</b>	5701
<b>UniProt ID:</b>	<u>P35998</u>
<b>Cytogenetics:</b>	7q22.1
<b>Protein Pathways:</b>	Proteasome
<b>Gene Summary:</b>	<p>The 26S proteasome is a multicatalytic proteinase complex with a highly ordered structure composed of 2 complexes, a 20S core and a 19S regulator. The 20S core is composed of 4 rings of 28 non-identical subunits; 2 rings are composed of 7 alpha subunits and 2 rings are composed of 7 beta subunits. The 19S regulator is composed of a base, which contains 6 ATPase subunits and 2 non-ATPase subunits, and a lid, which contains up to 10 non-ATPase subunits. Proteasomes are distributed throughout eukaryotic cells at a high concentration and cleave peptides in an ATP/ubiquitin-dependent process in a non-lysosomal pathway. An essential function of a modified proteasome, the immunoproteasome, is the processing of class I MHC peptides. This gene encodes one of the ATPase subunits, a member of the triple-A family of ATPases which have a chaperone-like activity. This subunit has been shown to interact with several of the basal transcription factors so, in addition to participation in proteasome functions, this subunit may participate in the regulation of transcription. This subunit may also compete with PSMC3 for binding to the HIV tat protein to regulate the interaction between the viral protein and the transcription complex. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Mar 2011]</p>