

## Product datasheet for **RG201810**

### S4 (PSMC1) (NM\_002802) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	S4 (PSMC1) (NM_002802) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	S4
Synonyms:	P26S4; p56; RPT2; S4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG201810 representing NM_002802 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGTCAAAGTCAGAGTGGTGGTCATGGTCCTGGAGGTGGCAAGAAGGATGACAAGGACAAGAAAAAGA  
AATATGAACCTCCTGTACCAACTAGAGTGGGAAAAAGAAGAAAACAAGGGACCAGATGCTGCCAG  
CAAAGTCCACTGGTACACCTCACACTCAGTCCGGTAAAATTACTGAAGTTAGAGAGAATTAAGAC  
TATCTTCTCATGGAGGAAGAATTCATTAGAAATCAGGAACAAATGAAACCATTAGAAGAAAAGCAAGAGG  
AGGAAAGATCAAAGTGGATGATCTGAGGGGACCCCGATGTCAGTAGGAACCTTGAAGAGATTATTGA  
TGACAATCATGCCATCGTGTCTACATCTGTGGGCTCAGAACACTACGTCAGCATTCTTTCATTTGTAGAC  
AAGGATCTGCTGGAACCTGGCTGCTCGGTCCTGCTCAACCACAAGGTGCATGCCGTGATAGGGGTGCTGA  
TGGATGACACGGATCCCCTGGTCACAGTATGAAGGTAGAAAAGGCCCCAGGAGACCTATGCAGATAT  
TGGGGGGTTGGACAACCAAAATTCAGGAAATTAAGGAATCTGTGGAGCTTCTCTCACCCATCCTGAATAT  
TATGAAGAGATGGGTATAAAGCCTCCTAAGGGGTCATTCTCTATGGTCCACCTGGCACAGGTAACCT  
TGTTAGCCAAAGCAGTAGCAAACCAACCTCAGCCACTTCTTGAGAGTGGTTGGCTCTGAACCTATTCA  
GAAGTACCTAGGTGATGGGCCAAACTCGTACGGGAATGTTCCGAGTTGCTGAAGAATGCACCGTCC  
ATCGTGTATTGATGAAATTGACGCCATTGGGCAAAAAGATATGACTCCAATCTGGTGGTGAAGAG  
AAATTCAGCGAACAATGTTGAACTGCTGAACCAGTTGGATGGATTTGATTCTAGGGGAGATGTGAAAGT  
TATCATGGCCACAACCGAATAGAACTTTGGATCCAGCACTTATCAGACCAGGCCGATTGACAGGAAG  
ATTGAGTCCCTGCTGATGAAAAGACGAAGAAGCGCATCTTTCAGATTACACAAGCAGGATGACGC  
TGGCTGATGATGTAACCTGGACGACCTGATCATGGCTAAAGATGACCTCTCTGGTCTGACATCAAGGC  
AATCTGTACAGAAGCTGGTCTGATGGCCTTAAGAGAACGTAGAATGAAAGTAACAATGAAGACTTCAA  
AAATCTAAAGAAAATGTTCTTTATAAGAAACAGGAAGGCCACCCCTGAGGGGCTGTATCTC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG201810 representing NM\_002802  
Red=Cloning site Green=Tags(s)

MGQSQSGGHGPGGGKDDKDKKKKYEPVPTRVGKKKKTKGPDAAASKLPLVTPHTQCRLKLLKLERIKD  
 YLLMEEEFIRNQE QMKPLEEKQEEERSKVDDL RGT PMSVGTLEE I IDDNHAI VST SVGSEHYVSI LSFVD  
 KD LLEPGCSVLLNHK VHAVIGVLMDDTDPLVTVMKVEKAPQET YADIGGLDNQIQEIKESVELPLTHPEY  
 YEEMGIKPPKGVILYGPPTGKTL LAKAVANQTSATFLRVVGS ELIQKYLGDGPKLVRELF RVAEEHAPS  
 IVFIDEIDAIGTKRYDSNSGGEREIQR TMLLELLNQLDGFDSR G DVK VIMATNR IETLDPALIRPGRIDRK  
 IEFPLPDEKTKRIFQIHTSRMTLADDVTLDDLIMAKDDL S GADIKAICTEAGLMALRERRMKT V NEDFK  
 KSKENLVLYKKQEGTPEGLYL

TRTRPLE - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_002802

**ORF Size:** 1320 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\\_002802.2](#), [NP\\_002793.2](#)

**RefSeq Size:** 1586 bp

**RefSeq ORF:** 1323 bp

**Locus ID:** 5700

**UniProt ID:** [P62191](#)

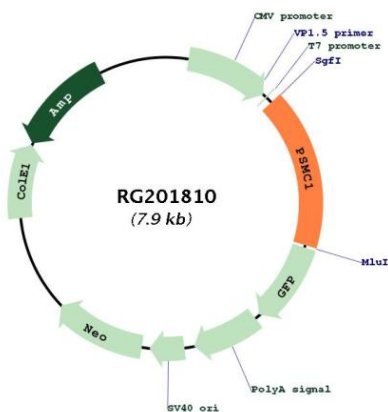
**Cytogenetics:** 14q32.11

**Domains:** AAA, AAA

**Protein Pathways:** Proteasome

**Gene Summary:** 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 and a 20S core alpha subunit interact specifically with the hepatitis B virus X protein, a protein critical to viral replication. This subunit also interacts with the adenovirus E1A protein and this interaction alters the activity of the proteasome. Finally, this subunit interacts with ataxin-7, suggesting a role for the proteasome in the development of spinocerebellar ataxia type 7, a progressive neurodegenerative disorder. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG201810