

Product datasheet for **RC201810**

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:	Myc-DDK
Symbol:	S4
Synonyms:	P26S4; p56; RPT2; S4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC201810 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGTCAAAGTCAGAGTGGTGGTCATGGTCTGGAGGTGGCAAGAAGGATGACAAGGACAAGAAAAAGA
 AATATGAACCTCCTGTACCAACTAGAGTGGGGAAAAAGAAGAAGAAAACAAGGGACCAGATGCTGCCAG
 CAAACTGCCACTGGTGACACCTCACACTCAGTGCCGGTTAAAATTACTGAAGTTAGAGAGAATTAAGAC
 TATCTTCTCATGGAGGAAGAATTCATTAGAAATCAGGAACAAATGAAACCATTAGAAGAAAAGCAAGAGG
 AGGAAAGATCAAAGTGGATGATCTGAGGGGGACCCCGATGTCAGTAGGAACCTTGAAGAGATTATTGA
 TGACAATCATGCCATCGTGTCTACATCTGTGGGCTCAGAACACTACGTCAGCATTCTTTCATTTGTAGAC
 AAGGATCTGCTGGAACCTGGCTGCTCGGTCTGCTCAACCACAAGGTGCATGCCGTGATAGGGGTGCTGA
 TGGATGACACGGATCCCCTGGTCACAGTATGAAGGTAGAAAAGGCCCCCGAGGAGCCTATGCAGATAT
 TGGGGGGTTGGACAACCAAAATTCAGGAAATTAAGGAATCTGTGGAGCTTCTCTCACCCATCCTGAATAT
 TATGAAGAGATGGGTATAAAGCCTCCTAAGGGGGTCAATCTCTATGGTCCACCTGGCACAGTAAAACCT
 TGTTAGCCAAAGCAGTAGCAAACCAAACCTCAGCCACTTCTTGAGAGTGGTGGCTCTGAACCTATTCA
 GAAGTACCTAGGTGATGGGCCAAAACCTCGTACGGGAATTGTTCCGAGTTGCTGAAGAATGCACCGTCC
 ATCGTGTATTATTGATGAAATTGACGCCATTGGGACAAAAAGATATGACTCCAATTCTGGTGGTGAGAGAG
 AAATTCAGCGAACAAATGTTGAACTGCTGAACCAGTTGGATGGATTTGATTCTAGGGGAGATGTGAAAGT
 TATCATGGCCACAACCGAATAGAACTTTGGATCCAGCACTTATCAGACCAGGCCCGATTGACAGGAAG
 ATTGAGTCCCCCTGCCTGATGAAAAGACGAAGAAGCGCATCTTTCAGATTACACAAGCAGGATGACGC
 TGGCTGATGATGAACCTGGACGACCTGATCATGGCTAAAGATGACCTCTCTGGTGTGACATCAAGGC
 AATCTGTACAGAAGCTGGTCTGATGGCCTTAAGAGAAGCTAGAATGAAAGTAACAATGAAGACTTCAA
 AATCTAAAGAAAATGTTCTTTATAAGAAACAGGAAGGCACCCCTGAGGGGCTGTATCTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC201810 protein sequence
 Red=Cloning site Green=Tags(s)

MGQSQSGGHGPGGGKKDDKDKKKKYEPPVTRVGKKKKTKGPDAAASKLPLVTPHTQCRLKLLKLERIKD
 YLLMEEEFIRNQEQMKPLEEKQEEERSKVDDLRGTPMSVGTLEEIIDDNHAIIVSTSVGSEHYVSIILSFVD
 KDILLEPGCSVLLNHKVHAVIGVLMDDTDPLVTVMKVEKAPQETYADIGGLDNQIQEIKESVELPLTHPEY
 YEEMGIKPPKGVILYPPGTGKTLAKAVANQTSATFLRVVSGELIQKYLGDGPKLVRELFRVAEEHAPS
 IVFIDEIDAIGTKRYDSNSGGEREIQRMLELLNQLDGFDSRGDVKIVIMATNRIETLDPALIRPGRIDRK
 IEFPLPDEKTKRIFQIHTRMTLADDVTLDDLIMAKDDL SGADIKAICTEAGLMALRERRMKVTNEDFK
 KSKENVL YKKQEGTPEGLYL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6084_f03.zip

Restriction Sites:

Sgfl-Mlul

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_002802.3](#)

RefSeq Size: 1586 bp

RefSeq ORF: 1323 bp

Locus ID: 5700

UniProt ID: [P62191](#)

Cytogenetics: 14q32.11

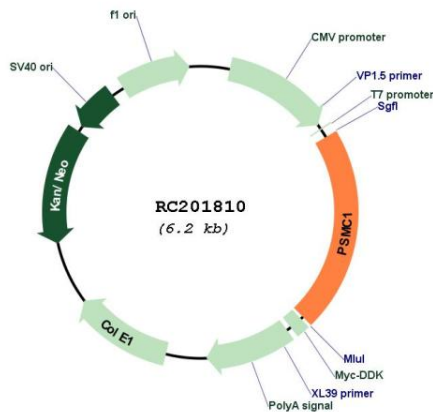
Domains: AAA, AAA

Protein Pathways: Proteasome

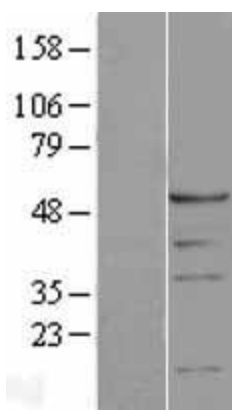
MW: 49.2 kDa

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 RC201810



Western blot validation of overexpression lysate (Cat# [LY400990]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201810 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PSMC1 protein (Cat# [TP301810]). The protein was produced from HEK293T cells transfected with PSMC1 cDNA clone (Cat# RC201810) using MegaTran 2.0 (Cat# [TT210002]).