

## Product datasheet for RC201251

### PSMC5 (NM\_002805) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PSMC5 (NM_002805) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PSMC5
Synonyms:	p45; p45/SUG; RPT6; S8; SUG-1; SUG1; TBP10; TRIP1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201251 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGCTTGACGGACCAGAGCAGATGGAGCTGGAGGAGGGGAAGGCAGGCAGCGGACTCCGCCAATATT  
ATCTGTCCAAGATTGAAGAACTCCAGCTGATTGTGAATGATAAGAGCCAAAACCTCCGGAGGCTGCAGGC  
ACAGAGGAACGAACTAAATGCTAAAGTTCGCTATTGCGGGAGGAGCTACAGCTGCTGCAGGAGCAGGGC  
TCCTATGTGGGGAAAGTAGTCCGGGCCATGGATAAGAAGAAAGTGTGGTCAAGGTACATCTGAAGGTA  
AATTTGTTGTAGACGTGGACAAAACATTGACATCAATGATGTGACACCCAATTGCCGGTGGCTCTAAG  
GAATGACAGCTACACTCTGCACAAGATCCTGCCCAACAAGGTAGACCCATTAGTGTCACTGATGATGGTG  
GAGAAAGTACCAGATTCAACTTATGAGATGATTGGTGGACTGGACAAACAGATCAAGGAGATCAAGAAG  
TGATCGAGCTGCCTGTTAAGCATCCTGAGCTCTTCAAGCACTGGGCATTGCTCAGCCCAAGGGAGTGCT  
GCTGTATGGACCTCCAGGCACTGGGAAGCACTGTTGGCCCGGGCTGTGGCTCATACAGGACTGTACC  
TTTATTCGTGTCTCTGGCTCTGAACTGGTACAGAAATTCATAGGGGAAGGGGCAAGAATGGTGAGGGAGC  
TGTTTGTGATGGCACGGGAACATGCTCCATCTATCATCTTCATGGACGAAATCGACTCCATCGGCTCCTC  
GCGGCTGGAGGGGGTCTGGAGGGGACAGTGAAGTGCAGCGCACGATGCTGGAGTTGCTCAACCACTCG  
GACGGCTTTGAGGCCACCAAGAACATCAAGGTTATCATGGCTACTAATAGGATTGATATCCTGGACTCGG  
CACTGCTTCGCCAGGGGCATTGACAGAAAAATTGAATTCACCCCAATGAGGAGGCCCGGCTGGA  
CATTTTGAAGATTCATTCTCGGAAGATGAACCTGACCCGGGGATCAACCTGAGAAAAATTGCTGAGCTC  
ATGCCAGGAGCATCAGGGGCTGAAGTGAAGGGCGTGTGCACAGAAGCTGGCATGTATGCCCTGCGAGAAC  
GGCGAGTCCATGTCACTCAGGAGGACTTTGAGATGGCAGTAGCCAAGGTCATGCAGAAGGACAGTGAGAA  
AAACATGTCCATCAAGAAATTATGGAAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC201251 protein sequence  
Red=Cloning site Green=Tags(s)

MALDGPEQMELEEGKAGSGLRQYYLSKIEELQLVNDKSQNLRRLLQAQRNELNAKVRLREELQLLQEQG  
 SYVGEVVRAMDKKKVLKVVHPEGKVVVDVKNIDINDVTPNCRVALRNDSTYTLHKILPNKVDPLVSLMMV  
 EKVPDSTYEMIGGLDKQIKEIKEVIELPVKHPELFEALGIAQPKGVLLYGPPGTGKTLARAVAHHTDCT  
 FIRVSGSELVQKFIGEGARMVRELFVMAREHAPSIIFMDEIDSIGSSRLEGGSGGDSEVQRTMLELLNQL  
 DGFEATKNIKVIMATNRIDILDSALLRPGRIDRKIEFPPNPEARLDILKIHRSKMNLTRGINLRKIAEL  
 MPGASGAEVKGVCTEAGMYALRERRVHVTDQDFEMAVAKVMQKDEKNSIKKLWK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6083\\_h08.zip](https://cdn.origene.com/chromatograms/mk6083_h08.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_002805

**ORF Size:** 1218 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_002805.6](#)

**RefSeq Size:** 1372 bp

**RefSeq ORF:** 1221 bp

**Locus ID:** 5705

**UniProt ID:** [P62195](#)

**Cytogenetics:** 17q23.3

**Domains:** AAA, AAA

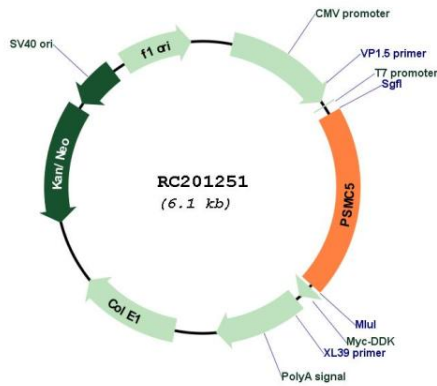
**Protein Families:** Druggable Genome

**Protein Pathways:** Proteasome

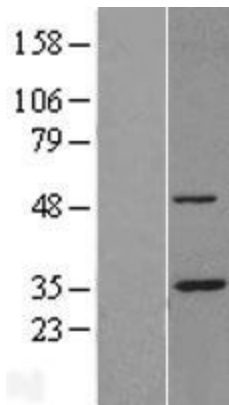
**MW:** 45.6 kDa

**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. In addition to participation in proteasome functions, this subunit may participate in transcriptional regulation since it has been shown to interact with the thyroid hormone receptor and retinoid X receptor-alpha. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Nov 2010]

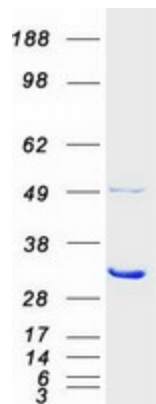
Product images:



Circular map for RC201251



Western blot validation of overexpression lysate (Cat# [LY419100]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201251 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PSMC5 protein (Cat# [TP301251]). The protein was produced from HEK293T cells transfected with PSMC5 cDNA clone (Cat# RC201251) using MegaTran 2.0 (Cat# [TT210002]).