

Product datasheet for **RC200945**

PSMC2 (NM_002803) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PSMC2 (NM_002803) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PSMC2
Synonyms:	MSS1; Nbla10058; RPT1; S7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC200945 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCCGGATTACCTCGGTGCCGATCAGCGGAAGACCAAGAGGATGAGAAGGACGACAAGCCATCCGAG
 CTCTGGATGAGGGGGATATTGCCTTGTGAAAACCTTATGGTCAGAGCACTTACTCTAGGCAGATCAAGCA
 AGTTGAAGATGACATTCAGCAACTTCTCAAGAAAATTAATGAGCTCACTGGTATTAAAGAATCTGCACT
 GGCCTGGCCCCACCAGCACTCTGGGATTTGGTGCAGATAAGCAGACACTCCAGAGTGAACAGCCTTTAC
 AGGTTGCCAGGTGTACAAAGATAATCAATGCTGATTCGGAGGACCCAAAATACATTATCAACGTAAGCA
 GTTTGCCAAGTTTGGTGGACCTTAGTGATCAGGTGCCACTACTGACATTGAAGAAGGGATGAGAGTG
 GCGTGGATAGAAATAAATATCAAATTCACATTCATTGCCTCCTAAGATTGACCCAACAGTTACCATGA
 TGCAGGTGAAGAGAAACCTGATGTCACATACAGTGATGTTGGTGGCTGAAGGAACAGATTGAGAACT
 GCGAGAAGTAGTTGAAACCCATTACTTCATCCAGAGAGGTTTGTGAACCTTGGCATTGAGCCTCCCAAG
 GCGTGTGCTCTTTGGTCCACCCGGTACAGGCAAGACACTCTGTGCGCGGCAGTTGCTAATCGGACTG
 ATGCGTGTCTTATTTCGAGTTATTGGATCTGAGCTTGTACAGAAATACGTCGGTGAAGGGGGCTCGAATGGT
 TCGTGAATCTTTGAAATGGCCAGAACAAAAAGCCTGCCTTATCTTCTTTGATGAAATTGATGCTATT
 GGAGGGGCTCGTTTTGATGATGGTGTGGAGGTGACAATGAAGTGCAGAGAACAAATGTTGGAAGTATCA
 ATCAGCTTGATGGTTTTGATCCTCGAGGCAATATAAAGTGTGATGGCCACTAACAGACCTGATACTTT
 GGATCCAGCACTGATGAGGCCAGGGAGATTGGATAGAAAAATTGAATTTAGCTTGCCCGATCTAGAGGT
 CGGACCCACATATTTAAGATTCACGCTCGTTCAATGAGTGTGAAAGAGATATCAGATTTGAACTGTTAG
 CACGACTGTGCCAAATAGCACTGGTGTGATGATTAGAAGCGTCTGCACAGAGGCTGGTATGTTTGCCAT
 CAGAGCACGGCGAAAAATTGCTACCGAGAAGGATTTCTTGAAGCTGTAATAAGGTCATTAAGTCTTAT
 GCCAAATTCAGTGCTACTCCTCGTTACATGACATAACAAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC200945 protein sequence
 Red=Cloning site Green=Tags(s)

MPDYLGADQRKTKEDKDDKPIRALDEGDIALLKTYGQSTYSRQIKQVEDDIQQLLKKINELTGIKESDT
 GLAPPALWDLAADKQTLQSEQPLQVARCTKIINADSEDPKYIINVKQFAKFVVDLSDQVAPT DIEEGMRV
 GVDNRKYQIHIPLPPKIDPTVTMMQVEEKPDVTYSVGGCKEQIEKLREVVETPLLHPERFVNLGIEPPK
 GVLLFGPPGTGKTL CARAVANRTDACFIRVIGSELVQKYVGE GARMVREL FEMARTKKACLIFFDEIDAI
 GGARFDDGAGDNEVQRTMLELINQLDGFDPGRNIKVL MATNRPDTLDPALMRPGR LDRKIEFSLPDLEG
 RTHIFKIHARMSVERDIRFELLARLCPNSTGAEIRSVCTEAGMFAIRARRKIATEKDFLEAVNKVIKSY
 AKFSATPRYMTYN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6177_g05.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_002803

ORF Size: 1299 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_002803.3](#)

RefSeq Size: 2846 bp

RefSeq ORF: 1302 bp

Locus ID: 5701

UniProt ID: [P35998](#)

Cytogenetics: 7q22.1

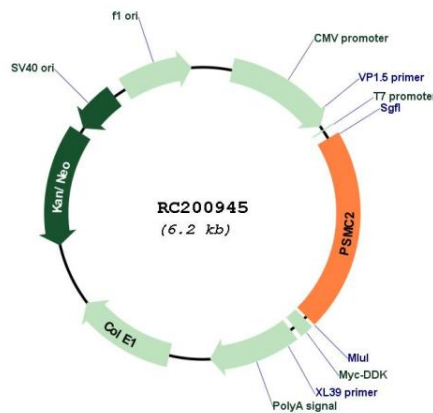
Domains: AAA, AAA

Protein Pathways: Proteasome

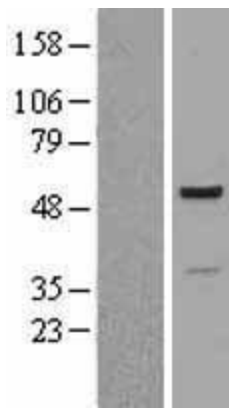
MW: 48.6 kDa

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. 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]

Product images:



Circular map for RC200945



Western blot validation of overexpression lysate (Cat# [LY400991]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200945 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).