

Product datasheet for **RC203204**

PSMD2 (NM_002808) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PSMD2 (NM_002808) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PSMD2
Synonyms:	P97; RPN1; S2; TRAP2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC203204 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGGAGGAGGCCGGGACAAGGCGCCGGTGCAGCCCCAGCAGTCTCCAGCGGGCCCCCGCGGCCA
 CGGACGAGAAGCCGAGCGCAAGGAGCGCGGGATGCCGGGACAAGGACAAAGAACAGGAGCTGTCTGA
 AGAGGATAAACAGCTTCAAGATGAACTGGAGATGCTCGTGAACGACTAGGGGAGAAGGATACATCCCTG
 TATCGACCAGCGCTGGAGGAATTGCAAGGCAGATTTCGTTCTTCTACAACCTCCATGACTTCAGTGCCCA
 AGCCTCTCAAATTTCTCGTCCACACTATGGCAAAGTGAAGAAATCTATGAGAACATGGCCCTGGGGA
 GAATAAGCGTTTTGCTGCTGACATCATCCGTTTTGGCCATGACCATGAGTGGGAGCGTGAGTGCCCTC
 AAGTATCGGCTAGTGGGCTCCAGGAGGAATTGGCATCATGGGTCATGAGTATGTCAGGCATCTGGCAG
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 ATCTTACCTCCTGCAAGGATGTGGTAGTACAGAAACAGATGGCATTGATGCTAGGCCGGCATGGGGTGT
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 CCTCTTTTGTGAATGGCTTTGTGAATGCAGCTTTTGGCCAAGACAAGCTGCTAACAGATGATGGCAACA
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 TATCCTCAGACCATCATGGAGAAGTCAAGACTGAGCTCAAGGATACTTATGCTCGTTGGCTTCTCTT
 GGACTGGGTCTCAACCACCTGGGAAGGGTGGAGCCATCGAGGCAATCCTGGCTGCACTGGAGGTTGTGT
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 AAGAAGGAAAAGAAAGACAAGGACAAGAAGGAAGCCCTGCTGACATGGGAGCACATCAGGGAGTGGCTG
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 AATCCACGACTCAACATCCTGGATACCCTAAGCAAATCTCTCATGATGCTGATCCAGAAGTTTCTATT
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 CCAGTGTCTGTCGTGGGCCAGGAGTGGATGTGGTGGCCAGGCTGGCAAGCCGAAGACTATCACAG
 GGTTCAGACGCATAACAACCCAGTGTGTTGGCCACGGGGAACGGGCAGAATTGGCCACTGAGGAGTT
 TCTTCTGTTACCCCATCTGGAAGTTTTGTTATCCTTCGGAAGAACCCCAATTATGATCTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC203204 protein sequence
 Red=Cloning site Green=Tags(s)

MEEGGRDKAPVQPQQSPAAAPGGTDEKPSGKERRDAGDKDKEQELSEEDKQLQDELEMLVERLGEKDTSL
 YRPALAEELRRQIRSSTTSMTSVPKPLKFLRPHYGKLEIYENMAPGENKRFAADIISVLAMTMSGERECL
 KYRLVGSQEELASWGHEYVRHLAGEVAKWEQELDDAEKVQREPLLTLVKEIVPYNMAHNAEHEACDLLME
 IEQVDMLEKIDENAYKVCLYLTSVCVNYVPEPENSALLRCALGVFRKFSRFPEALRLALMLNDMELVED
 IFTSCKDVVVQKQMAFMLGRHGVFLELSEDVVEEYEDLTEIMSNVQLNSNFLALARELDIMEPKVPDDIYK
 THLENNRFGGSGSQVDSARMNLASSFVNGFVNAAFGQDKLLTDDGNKWLKYNKDHGMLSAAASLGMILLW
 DVDGGLTQIDKLYSSEDIKSGALLACGIVNSGVRNECDPALALLSDYVLHNSNTMRLGSIFGLGLAYA
 GSNREDVLTLLLPVMGDSKSSMEVAGVTALACGMIAVGSCNGDVTSTILQTIMEKSETELKDTYARWPL
 GLGLNHLGKGEAIEAILAALEVSEPFRRFANTLVDVCA YAGSGNVLKVQQLLHCSEHFDSKEKEEDKD
 KKEKKDKDKEAPADMGAHQGVAVLGIALIAMGEEIGAEMALRTFGHLLRYGEPTLRRVPLALALISVS
 NPRLNILDTL SKF SHDADPEVSYYSIFAMGMVSGTNNARLAAMLRLAQAQYHAKDPNNLFMVRLAQLGTH
 LGKGTLLCPYHSRQLMSQVAVAGLLTVLVSFLDVRNIILGKSHYVLYGLVAAMQPRMLVTFDEELRPL
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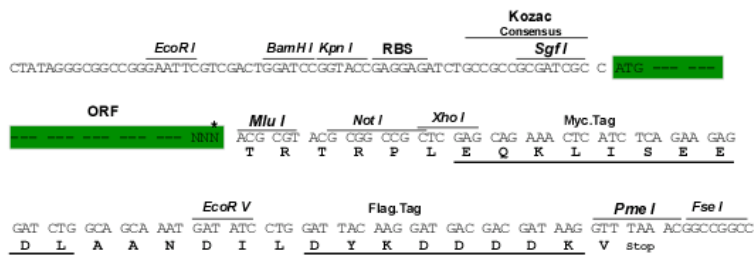
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6209_c11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

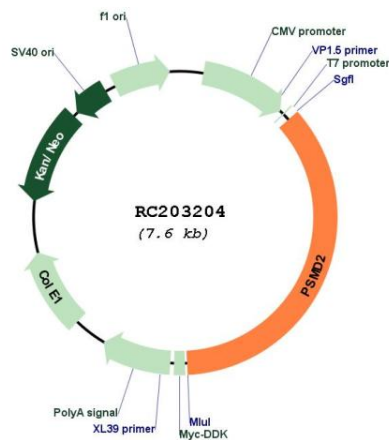
ACCN: NM_002808

ORF Size:	2724 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:	<ol style="list-style-type: none">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_002808.2
RefSeq Size:	3076 bp
RefSeq ORF:	2727 bp
Locus ID:	5708
UniProt ID:	Q13200
Cytogenetics:	3q27.1
Domains:	PC_rep
Protein Families:	Druggable Genome
Protein Pathways:	Proteasome
MW:	100.2 kDa

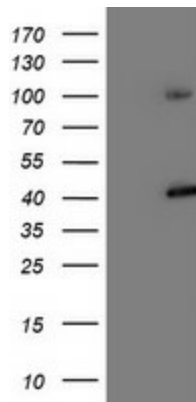
Gene Summary:

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 non-ATPase subunits of the 19S regulator lid. In addition to participation in proteasome function, this subunit may also participate in the TNF signalling pathway since it interacts with the tumor necrosis factor type 1 receptor. A pseudogene has been identified on chromosome 1. Alternative splicing results in multiple transcript variants of this gene. [provided by RefSeq, Jul 2013]

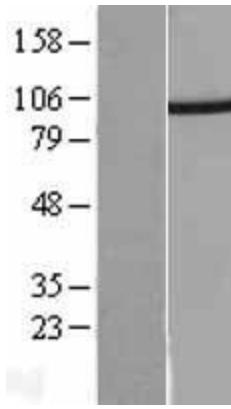
Product images:



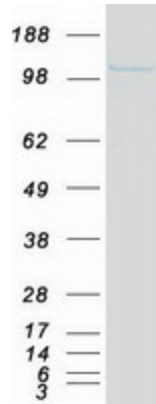
Circular map for RC203204



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PSMD2 (Cat# RC203204, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-PSMD2(Cat# [TA503217]). Positive lysates [LY419097] (100ug) and [LC419097] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419097]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203204 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PSMD2 protein (Cat# [TP303204]). The protein was produced from HEK293T cells transfected with PSMD2 cDNA clone (Cat# RC203204) using MegaTran 2.0 (Cat# [TT210002]).