

## Product datasheet for RC201799

### Proteasome 20S beta 7 (PSMB7) (NM\_002799) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Proteasome 20S beta 7 (PSMB7) (NM_002799) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Proteasome 20S beta 7
Synonyms:	Z
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC201799 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGCTGTGTCGGTGTATGCTCCACCAGTTGGAGGCTTCTCTTTTGATAACTGCCGAGGAATGCCG  
TCTTGGAAGCCGATTTTGCAAAGAGGGGATACAAGCTTCAAAGGCCGGAAAACGGCACGACCATCGC  
TGGGGTGGTCTATAAGGATGGCATAGTTCTTGGAGCAGATACAAGAGCAACTGAAGGGATGGTTGTTGCT  
GACAAGAAGTGTCAAAAATACACTTCATATCTCCTAATATTTATTGTTGTGGTGTGGGACAGCTGCAG  
ACACAGACATGACAACCCAGCTCATTTCTCCAACCTGGAGCTCCACTCCCTCTCCACTGGCCGTCTTCC  
CAGAGTTGTGACAGCCAATCGGATGCTGAAGCAGATGCTTTTCAGGTATCAAGGTTACATTGGTGCAGCC  
CTAGTTTTAGGGGAGTAGATGTTACTGGACCTCACCTCTACAGCATCTATCCTCATGGATCAACTGATA  
AGTTGCCTTATGTCACCATGGGTTCTGGCTCCTTGGCAGCAATGGCTGTATTTGAAGATAAGTTTAGGCC  
AGACATGGAGGAGGAGGAAGCAAGAATCTGGTGAAGCAAGCCATCGCAGCTGGCATCTTCAACGACCTG  
GGCTCCGGAAGCAACATTGACCTCTGCGTCATCAGCAAGAACAAGCTGGATTTTCCGCCCATACACAG  
TGCCCAACAAGAAGGGGACCAGGCTTGGCCGATACAGGTGTGAGAAAGGGACTACTGCAGTCCCTACTGA  
AAAATCACTCCTCTGGAGATTGAGGTGCTGGAAGAAACAGTCCAACAATGGACTTCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC201799 protein sequence  
 Red=Cloning site Green=Tags(s)

MAAVSVYAPPVGGFSFDNCRNAVLEADFAKRGYKLPKARKTGTTIAGVVYKDGIVLGADTRATEGMVVA  
 DKNCSKIHFISPNYCCGAGTAADTDMTTLISSNLELHSLSTGRLPRVVTANRMLKQMLFRYQGYIGAA  
 LVLGGVDVTGPHLYSIYPHGSTDKLPYVTMGSGLAAMAVFEDKFRPDMEEEEAKNLVSEIAAGIFNDL  
 GSGSNIDL CVISKNKLDL RPYTPV NKKGTRLGRYRCEKGT TAVL TEKITPLEIEVLEETVQTMDTS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6084\\_d09.zip](https://cdn.origene.com/chromatograms/mk6084_d09.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\_002799

**ORF Size:** 831 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\\_002799.4](#)

**RefSeq Size:** 1043 bp

**RefSeq ORF:** 834 bp

**Locus ID:** 5695

**UniProt ID:** [Q99436](#)

**Cytogenetics:** 9q33.3

**Domains:** proteasome

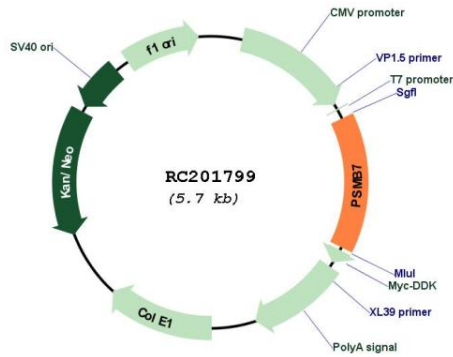
**Protein Families:** Druggable Genome, Protease

**Protein Pathways:** Proteasome

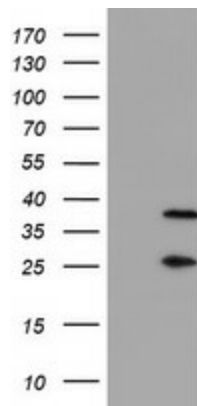
**MW:** 29.9 kDa

**Gene Summary:** The proteasome is a multicatalytic proteinase complex with a highly ordered ring-shaped 20S core structure. The core structure 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. Proteasomes are distributed throughout eukaryotic cells at a high concentration and cleave peptides in an ATP/ubiquitin-dependent process in a non-lysosomal pathway. The encoded protein is a member of the proteasome B-type family, also known as the T1B family, and is a 20S core beta subunit in the proteasome. Expression of this catalytic subunit is downregulated by gamma interferon, and proteolytic processing is required to generate a mature subunit. A pseudogene of this gene is located on the long arm of chromosome 14. [provided by RefSeq, Jul 2012]

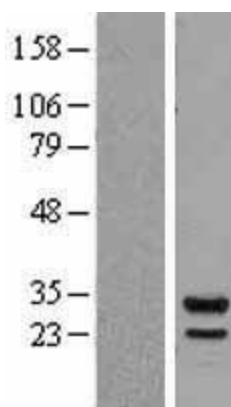
Product images:



Circular map for RC201799



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY PSMB7 (Cat# RC201799, 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-PSMB7(Cat# [TA504368]). Positive lysates [LY400993] (100ug) and [LC400993] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400993]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC201799 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).