

Product datasheet for **RG201798**

Proteasome beta 1 (PSMB1) (NM_002793) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Proteasome beta 1 (PSMB1) (NM_002793) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Proteasome beta 1
Synonyms:	HC5; PMSB1; PSC5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG201798 representing NM_002793 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTTGTCCTCTACAGCCATGTATTCGGCTGCTGGCAGAGACTTGGGGATGGAACCGCACAGAGCCCGG
GCCCTTTCAGCTGCGATTTTCGCCCTACGTTTTCAACGGAGGTACTATACTGGCAATTGCTGGAGAAGA
TTTTGCAATTGTTGCTTCTGATACTCGATTGAGTGAAGGGTTTTCAATTCATACGCGGGATAGCCCCAAA
TGTTACAAATTAACAGACAAAACAGTCATTGGATGCAGCGTTTTTCATGGAGACTGTCTTACGCTGACAA
AGATTATTGAAGCAAGACTAAAGATGTATAAGCATTCCAATAATAAGGCCATGACTACGGGGCAATTGC
TGCAATGCTGTCTACAATCCTGTATTCAAGGCGCTTCTTCCATACTATGTTTACAACATCATCGGTGGA
CTTGATGAAGAAGGAAAGGGGGCTGTATACAGCTTTGATCCAGTAGGGTCTTACCAGAGAGACTCCTTCA
AGGCTGGAGGCTCAGCAAGTGCCATGCTACAGCCCTGCTTGACAACCAGGTTGGTTTTAAGAACATGCA
GAATGTGGAGCATGTTCCGCTGCTTGGACAGAGCCATGCGGCTGGTGAAGATGTCTTCAATTTCTGCG
GCTGAGAGAGATGTGTACACTGGGGACGCACTCCGGATCTGCATAGTGACCAAAGAGGGCATCAGGGAGG
AAACTGTTTCCTTAAGGAAGGAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG201798 representing NM_002793
 Red=Cloning site Green=Tags(s)

MLSSTAMYSAAGRDLGMEPHRAAGPLQLRFSPYVFNGGTILAIAGEDFAIVASDTRLSEGFSIHTRDSPK
 CYKLTDKTVIGCSGFHGDCLTLTKIIEARLKMVKHSNNKAMTTGAIAMLSTILYSRRFFPYVYNIIGG
 LDEEGKAVYSFDPVGSYQRDSFKAGGSASAMLQPLLDNQVGFKNMQNVEHVPLSLDRAMRLVKDVFISA
 AERDVYTGDALRICIVTKEGIREETVSLRKD

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002793

ORF Size: 723 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_002793.2](#), [NP_002784.1](#)

RefSeq Size: 872 bp

RefSeq ORF: 726 bp

Locus ID: 5689

UniProt ID: [P20618](#)

Cytogenetics: 6q27

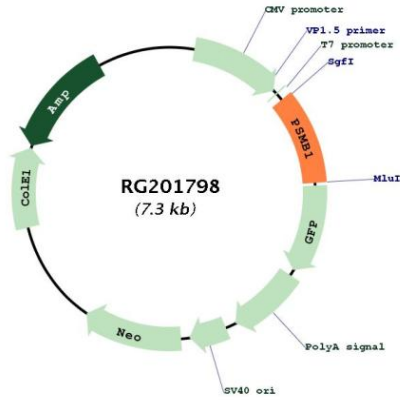
Domains: proteasome

Protein Families: Protease

Protein Pathways: Proteasome

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. An essential function of a modified proteasome, the immunoproteasome, is the processing of class I MHC peptides. This gene encodes a member of the proteasome B-type family, also known as the T1B family, that is a 20S core beta subunit. This gene is tightly linked to the TBP (TATA-binding protein) gene in human and in mouse, and is transcribed in the opposite orientation in both species. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG201798