

Product datasheet for **RC202431**

PSME2 (NM_002818) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	PSME2 (NM_002818) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	PSME2
Synonyms:	PA28B; PA28beta; REGbeta
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC202431 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCAAGCCGTGTGGGTGCGCCTGAGCGGGGAAGCCCGCAAACAGGTGGAGGTCTTCAGACAGAATC
TTTTCCAGGAGGCTGAGGAATTCCTCTACAGATTCTTGCCACAGAAAATCATATACCTGAATCAGCTCTT
GCAAGAGGACTCCCTCAATGTGGCTGACTTGACTTCCCTCCGGGCCCACTGGACATCCCATCCCAGAC
CCTCCACCAAGGATGATGAGATGGAACAGATAAGCAGGAGAAGAAAGAAGTCCCTAAGTGTGGATTTCC
TCCCTGGGAATGAGAAAGTCTGTCCTGCTTGCCTGGTTAAGCCAGAAGTCTGGACTCTCAAAGAGAA
ATGCATTCTGGTATTACATGGATCCAACACCTGATCCCCAAGATTGAAGATGGAATGATTTTGGGGTA
GCAATCCAGGAGAAGGTGCTGGAGAGGGTGAATGCCGTCAAGACCAAAGTGAAGCTTCCAGACAACCA
TTTCCAAGTACTTCTCAGAACGTGGGGATGCTGTGGCCAAGGCCTCCAAGGAGACTCATGTAATGGATTA
CCGGGCCCTTGGTGCATGAGCGAGATGAGGCAGCCTATGGGGAGCTCAGGGCCATGGTGTGGACCTGAGG
GCCTTCTATGCTGAGCTTATCATATCATCAGCAGCAACCTGGAGAAAATTGTCAACCAAAGGGTGAAG
AAAAGCCATCTATGTAC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC202431 protein sequence
 Red=Cloning site Green=Tags(s)

MAKPCGVRLSGEARKQVEVFRQNLFQEAEFLYRFLPQKIIYLNQLLQEDSLNVADLTSLRAPLDIIPD
 PPPKDDMETDKQEKKEVPKCGFLPGNEKVL SLLALVKPEVWTLKEKCILVITWIQHLIPKIEDGNDFGV
 AIQEKVLERVNAVKTKEAFQTTISKYF SERGDAVAKASKETHVMDYRALVHERDEAAAYGELRAMVLDLR
 AFYAELYHI ISSNLEKIVNPKGEEKPSMY

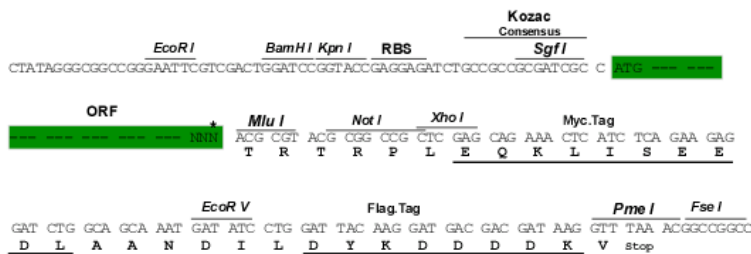
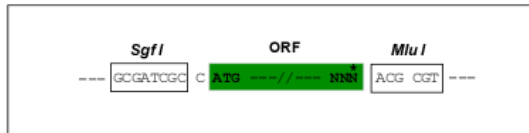
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6144_g08.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_002818

ORF Size: 717 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_002818.3](#)

RefSeq Size: 829 bp

RefSeq ORF: 720 bp

Locus ID: 5721

UniProt ID: [Q9UL46](#)

Cytogenetics: 14q12

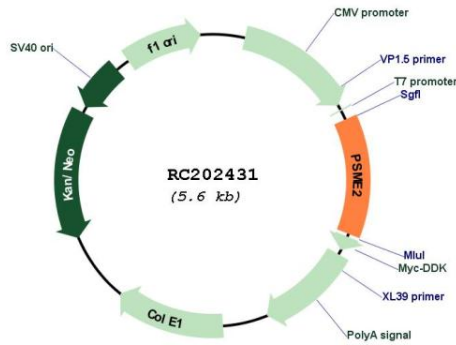
Domains: PA28_alpha, PA28_beta

Protein Pathways: Antigen processing and presentation, Proteasome

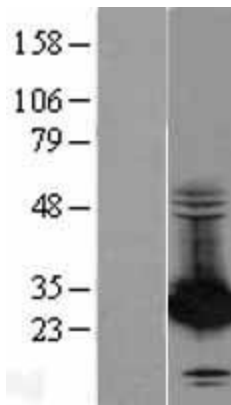
MW: 27.4 kDa

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. The immunoproteasome contains an alternate regulator, referred to as the 11S regulator or PA28, that replaces the 19S regulator. Three subunits (alpha, beta and gamma) of the 11S regulator have been identified. This gene encodes the beta subunit of the 11S regulator, one of the two 11S subunits that is induced by gamma-interferon. Three beta and three alpha subunits combine to form a heterohexameric ring. Six pseudogenes have been identified on chromosomes 4, 5, 8, 10 and 13. [provided by RefSeq, Jul 2008]

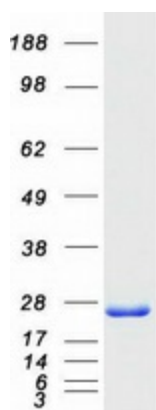
Product images:



Circular map for RC202431



Western blot validation of overexpression lysate (Cat# [LY400999]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202431 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PSME2 protein (Cat# [TP302431]). The protein was produced from HEK293T cells transfected with PSME2 cDNA clone (Cat# RC202431) using MegaTran 2.0 (Cat# [TT210002]).