

Product datasheet for RC210717

Proteasome 20S alpha 5 (PSMA5) (NM_002790) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Proteasome 20S alpha 5 (PSMA5) (NM_002790) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Proteasome 20S alpha 5
Synonyms:	PSC5; ZETA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC210717 representing NM_002790 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTTTCTTACCCGGTCTGAGTACGACAGGGCGTGAATACTTTTTCTCCGAAGGAAGATTATTTCAAG
TGGAAATAGCCATTGAGGCTATCAAGCTTGTTCTACAGCCATTGGGATCCAGACATCAGAGGGTGTGTG
CCTAGCTGTGGAGAAGAGAATTACTTCCCCTGATGGAGCCAGCAGCATTGAGAAAATTGTAGAGATT
GATGCTCACATAGTTGTCCATGAGTGGGCTAATTGCTGATGCTAAGACTTTAATTGATAAAGCCAGAG
TGGAGACACAGAACCCTGGTTACCTACAATGAGACAATGACAGTGGAGAGTGTGACCCAAGCTGTGTC
CAATCTGGCTTTGCAGTTTGGAGAAGAAGATGCAGATCCAGGTGCCATGTCTCGTCCCTTTGGAGTAGCA
TTATTATTTGGAGGAGTTGATGAGAAAGACCCAGCTGTTTCATATGGACCCATCTGGGACCTTTGTAC
AGTGTGATGCTCGAGCAATTGGCTCTGCTTCCAGAGGGTCCCAGAGCTCCTTGCAAGAAGTTTACCACAA
GTCTATGACTTTGAAAGAAGCCATCAAGTCTTCACTCATCATCCTCAAACAAGTAATGGAGGAGAAGCTG
AATGCAACAAACATTGAGCTAGCCACAGTGCAGCCTGGCCAGAATTTCCACATGTTCCAAAAGGAAGAAC
TTGAAGAGGTTATCAAGGACATT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC210717 representing NM_002790
 Red=Cloning site Green=Tags(s)

MFLTRSEYDRGVNTFSPEGRLFQVEYAIKLGSTAIGIQTSEGVCLAVEKRITSPLMPESSIEKIVEI
 DAHIGCAMSLIADAKTLIDKARVETQNHWFYNETMTVESVTQAVSNLALQGEEDADPGAMSRPFGVA
 LLFGGVDEKGPQLFHMDPSGTFVQCDAIIGSASEGAQSSSLQEVYHKSMTLKEAIKSSLIILKQVMEEKL
 NATNIELATVQPGQNFHMFTKEELEEVIKDI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/ja1491_e09.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_002790

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_002790.4](#)

RefSeq Size: 1023 bp

RefSeq ORF: 726 bp

Locus ID: 5686

UniProt ID: [P28066](#)

Cytogenetics: 1p13.3

Domains: proteasome

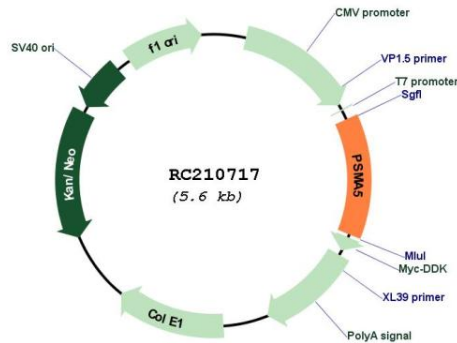
Protein Families: Druggable Genome, Protease

Protein Pathways: Proteasome

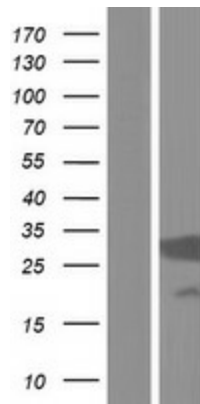
MW: 26.2 kDa

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. An essential function of a modified proteasome, the immunoproteasome, is the processing of class I MHC peptides. This gene encodes a member of the peptidase T1A family, that is a 20S core alpha subunit. Multiple alternatively spliced transcript variants encoding two distinct isoforms have been found for this gene. [provided by RefSeq, Dec 2010]

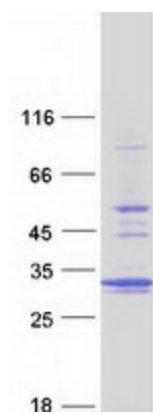
Product images:



Circular map for RC210717



Western blot validation of overexpression lysate (Cat# [LY419118]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210717 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified PSMA5 protein (Cat# [TP310717]). The protein was produced from HEK293T cells transfected with PSMA5 cDNA clone (Cat# RC210717) using MegaTran 2.0 (Cat# [TT210002]).