

## Product datasheet for **MG220510**

### Pitrm1 (NM\_145131) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Pitrm1 (NM_145131) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Pitrm1
Synonyms:	2310012C15Rik; AA410010; mKIAA1104; MP-1; MP1; Ntup1; PreP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG220510 representing NM_145131 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTGGCGCTTCAGCGGTCGGCGGGGACTCTGCGCTGTACAGCGGCTGAGCTGCGGCAGGGTACACCACA  
GAGTATGGAGGGAGAAGAGTGACCAAGCCTGTGAACGAGCTCTACAGTATAAAGTGGGAGAGAAAATCCA  
CGGGTTCAGTGTAAACCAGGTCCTCTGTCCCGAGCTGTTCTGACAGCCGTGAAGCTCAGCCATGAC  
AACACGGGAGCCAGATACCTGCACCTGGCAAGGGAAGACAAGAACAATTATTCAGTGTGCACTCCGCA  
CAACCCCAATGGATAGCACTGGGGTCCACATGTTCTCGAGCATACGGTCTGTGCGGCTCTCAGAAGTA  
CCCGTGCAGAGATCCTTTCTTCAAATGCTCAACAGGTCAGTCCACATTTATGAATGCCATGACAGCC  
AGCGATTACAGTATATCCGTTTTCCACTCAAAATCCCAAAGATTTTCAGAACCCTCTCCGTGTATT  
TGGATGCAACTTTCTTCCCTGCTTGAGGGAAGTGGACTTCTGGCAGGAAGGATGGCGTCTGGAGCATGA  
GAATCCCCGAGACCCCTCAGACGCCCTTGATCTTTAAGGGGGTCTGCTTCAACGAGATGAAAGGGGCATTT  
ACAGACAATGAGAGGATATTCTCCAGCACCTGCAGAACAAGTCTTCTGACCACTACTCCGTGG  
TTTCTGGAGGGGACCCACTGTGCATCCCGAGCTCACGTGGGAACAGTGAACAGTTCCACGCTACTCA  
TTATCACCAAGCAATGCCAGGTTCTTCACTTATGGCAATTTTCAGCTGGAAGGACACCTGAAACAATT  
CACGAAGAAGCCCTGAGTAAATTCAGAGATTGGAGCAGAGTACAGCAGTCCGTCAGCCGACTGGG  
ATAAGCCTAGGGAATTCATATAACATGTGCCAGATTCACTAGCTACGGAGACTGCCAAGCAGACAAC  
TGTCAGCGTTAGCTTCTTACCAGATATCACTGACACATTTGAAGCCTTACCTTGAGCCTTCTGTCC  
TCCCTCTGATTGCTGGACCCAACTCCCTTCTACAAAGCTTTGATCGAGTCTGGACTCGGCACAGACT  
TTTCTCTGATGTTGGATATAATGGCTATACACGGGAGGCTTACTTCACTGTCGGGCTCCAAGGGATCGC  
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GAAGATGATCGGATTGAAGCTCTGCTTCATAAAATCGAAATTCAAACGAAGCATCAGTCAGCCAGCTTTG  
GCCTGACCCTGACGTATATAGCTTCTGCTGGAACCATGATGGGACCCGTGGAGCTCTGCAGAT  
TGAAGTCAGCTGACTAGATTTAGGAAGTGCCTTAAGGAAAATCCAAAATTTTACAAGAAAAAGTAGAA



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CAATATTTAAGAACAATCAGCACAAGCTGACTTTATCCATGAAGCCAGACGACAAGTATTATGAAAAGC  
 AAACCTCAGATGGAGACAGAAAAGCTGGAGCAAAAGGTGAATTCTCTCTCCCGGGCGGACAAGCAGCAGAT  
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 CTCACCCACAGTGGGATTTTACGCTTACTCTTACAGGGATCCCAATTCATAGAAACTCCAGTCTT  
 TTGGGAAAGCTGTAGACTGGGCTAAGTCTGAAAGTTCACACAGCAGGACATTGATGAAGCAAGCTGTC  
 TGTTTTCTCTACTGTGATTCTCTGTTGCTCCATCCGATAAAGGAATGGACACTTCTTGTATGGCCTC  
 TCCGATGAGATGAAGCAGGCATACCGAGAACAGCTCTTTGCTGTCAACCACGACAAACTGACCTCTGTGA  
 GCCATAAATACCTTGGCATCGGGAAGACACACACGGCCTGGCTATCCTCGGACCAGAGAAGTCAAAAAT  
 TGCCAAAGACCCATCATGGATCATAAAA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>MG220510 representing NM\_145131  
 Red=Cloning site Green=Tags(s)

MWRFSGRRGLCAVQRLSCGRVHHRVWREKSDQACERALQYKVGKEIHGFTVNQVTPPELFLTAVKLSHD  
 NTGARYLHLAREDKNNLFSVQFRTTPMDSTGVPHVLEHTVLCGSQKYPDRDPFFKMLNRSLSLFMAMTA  
 SDYTIYPFSTQNPQDFQNLQSVYLDATFFPCLRELDWFQEGWRLEHENPRDPQTPLIFKGVVFNEMKGF  
 TDNERIFSQHLQNKLLPDHTYSVVSAGDPLCIPELTWEQLKQFHATHYHPSNARFFTYGNFQLEGLKQI  
 HEEALSKFQRLQSTAVPAQPHWDKPREFHITCGPDSLATETAKQTTVSVSFLLPDITDTFEAFTLSLLS  
 SLLIAGPNSPFYKALIESGLGTDSPDVGYNGYTREAYFSVGLQGIAEKDVKTRELVDRTIEEVIEKGF  
 EDDRIEALLHKIEIQTKHQASAFGLTTSYIASCWNHDGDPVELLQIGSQLTRFRKCLKENPKFLQEKVE  
 QYFKNNQHKLTL SMKPPDKYYEQTMETEKLEQKVNLSPADKQIYEGLELQTTQSKHQDASCLPAL  
 KVSDEIPEPMPFTKLDIGLAAGDIPVQYCPQPTNGMVYFRAFSSNLNLPEDLRPIVPLFCSVLTKLGCGIL  
 NYREQAQQIELKTGGMSVTPHVLPPDSQLDTYPEQGVLFSSLCLEARNLPDMMHLWSEIFNPNCFEEEEHFK  
 VLVKMTAQELSDSGHLYAALRASKTLTPSGDLQETFSGMDQVKVMKRIAEMTDIKPILRKLPRIKK  
 YLLNCDNMRCVSNATPQQMPQAEKEVENFLRNVGRSKKERKPVPRPHIVEKPTPSGSPGAHVSGSQIVRK  
 LVTDPFTKPCQMKTHFVLPFVNYIGECVRTVPYADPDHASLILARLMTAKFLHTEIREKGGAYGGGAK  
 LTHSGIFTLYSYRDPNSIETLQSFKAVDWAKSGKFTQQDIDEAKLSVFSVSTVDSVPVAPSDKGMDFLYGL  
 SDEMKAQYREQLFAVNHDKLTSVSHKYLIGKSTHGLAILGPENSKIADPSWIIK

TRTRPLE - GFP Tag - V

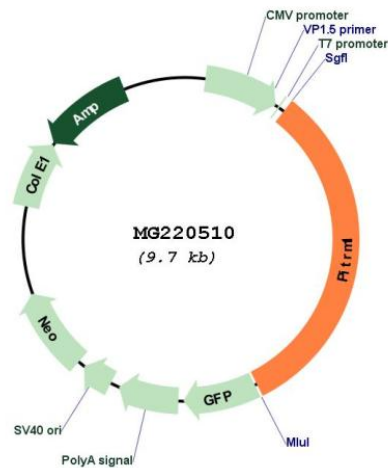
**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_145131

ORF Size: 3108 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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_145131.1</a></u> , <u><a href="#">NP_660113.1</a></u>
<b>RefSeq Size:</b>	3547 bp
<b>RefSeq ORF:</b>	3111 bp
<b>Locus ID:</b>	69617
<b>UniProt ID:</b>	<u><a href="#">Q8K411</a></u>
<b>Cytogenetics:</b>	13 A1
<b>Gene Summary:</b>	Metalloendopeptidase of the mitochondrial matrix that functions in peptide cleavage and degradation rather than in protein processing. Has an ATP-independent activity. Specifically cleaves peptides in the range of 5 to 65 residues. Shows a preference for cleavage after small polar residues and before basic residues, but without any positional preference. Degrades the transit peptides of mitochondrial proteins after their cleavage. Also degrades other unstructured peptides. It is also able to degrade amyloid-beta protein 40, one of the peptides produced by APP processing, when it accumulates in mitochondrion. It is a highly efficient protease, at least toward amyloid-beta protein 40. Cleaves that peptide at a specific position and is probably not processive, releasing digested peptides intermediates that can be further cleaved subsequently.[UniProtKB/Swiss-Prot Function]