

## Product datasheet for **RG200720**

### **MMP2 (NM\_004530) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MMP2 (NM_004530) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MMP2
Synonyms:	CLG4; CLG4A; MMP-2; MMP-II; MONA; TBE-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RG200720 representing NM\_004530  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGAGGCGCTAATGGCCCGGGCGCGCTCACGGTCCCCTGAGGGCGCTCTGTCTCCTGGGCTGCCTGC  
 TGAGCCACGCGCGCCGCGCCGTCGCCCATCATCAAGTTCGCCGCGATGTCGCCCCAAAACGGACAA  
 AGAGTTGGCAGTGAATACCTGAACACCTTCTATGGCTGCCCAAGGAGAGCTGCAACCTGTTTGTGCTG  
 AAGGACACACTAAAGAAGATGCAGAAGTCTTTGGACTGCCCCAGACAGGTGATCTTGACCAGAATACCA  
 TCGAGACCATGCGGAAGCCACGCTGCGGCAACCCAGATGTGGCCAACTACAACCTCTTCCCTCGAAGCC  
 CAAGTGGGACAAGAACCAGATCACATACAGGATCATTGGCTACACACCTGATCTGGACCCAGAGACAGTG  
 GATGATGCCTTTGCTCGTGCCTTCCAAGTCTGGAGCGATGTGACCCCACTGCGGTTTTCTCGAATCCATG  
 ATGGAGAGGCAGACATCATGATCAACTTTGGCCGCTGGGAGCATGGCGATGGATAACCCCTTGACGGTAA  
 GGACGGACTCCTGGCTCATGCCTTCGCCCAAGGCACTGGTGTGGGGGAGACTCCATTTTGATGACGAT  
 GAGCTATGGACCTTGGGAGAAGGCAAGTGGTCCGTGTGAAGTATGGCAACGCCGATGGGGAGTACTGCA  
 AGTTCCCTTCTTGTTCATGGCAAGGAGTACAACAGCTGCACTGATACTGGCCGACGATGGCTTCTCT  
 CTGGTGCCTCACCACTACAACCTTTGAGAAGGATGGCAAGTACGGCTTCTGTCCCATGAAGCCCTGTTT  
 ACCATGGGCGGCAACGCTGAAGGACAGCCCTGCAAGTTCATTCCGCTTCCAGGGCACATCCTATGACA  
 GCTGCACCACTGAGGGCCGACGGATGGTACCCTGGTGGCCACCACTGAGGACTACGACCCGCGACAA  
 GAAGTATGGCTTCTGCCCTGAGACCGCCATGTCCACTGTTGGTGGAACTCAGAAGGTGCCCCCTGTGTC  
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 GGTGTGCGACCAAGCAACTACGATGACGACCGCAAGTGGGGCTTCTGCCCTGACCAAGGGTACAGCT  
 GTTCTCGTGGCAGCCACGAGTTTGGCCACGCCATGGGGCTGGAGCACTCCAAGACCCTGGGGCCCTG  
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 TCTATGGGCCTCTCCTGACATTGACCTTGGCACCGGCCACCCACACTGGGCCCTGTCACTCCTGA  
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 CGGTTCACTTGGCGACTGTGACGCCACGTGACAAGCCCATGGGGCCCTGCTGGTGGCCACATTCTGGC  
 CTGAGCTCCCGAAAAGATTGATGCGGTATACGAGGCCACAGGAGGAGAAGGCTGTGTTCTTTGCAGG  
 GAATGAATACTGGATCTACTCAGCCAGCACCTGGAGCGAGGGTACCCCAAGCCACTGACCAGCCTGGGA  
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 CTGGAGACAAATTCTGGAGATACAATGAGGTGAAGAAGAAAATGGATCCTGGCTTTCCCAAGCTCATCGC  
 AGATGCCTGGAATGCCATCCCGATAACCTGGATGCCGTCTGGACCTGCAGGGCGCGGTACACAGCTAC  
 TTCTTCAAGGGTGCCTATTACCTGAAGCTGGAGAACCAAGTCTGAAGAGCGTGAAGTTTGAAGCATCA  
 AATCCGACTGGCTAGGCTGC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG200720 representing NM\_004530  
 Red=Cloning site Green=Tags(s)

```
MEALMARGALGPLRALCLLGCLLSHAAAAPSPIIKFPGDVAPKTDKELAVQYLNTFYGCPKESCNLFVL
KDTLKKMQKFFGLPQTGDLQNTIETMRKPRCGNPDVANYNFFPRKPKWDKNQITYRIIGYTPDLDPETV
DDAFARAFQVWSDVTPLRFSRIHDGEADIMINFGREHGDGYPFDGKDGLLAHAFAPGTGVGGDSHFDDD
ELWTLGEGQVVRVKYGNADGEYCKFPFLFNGKEYNSCTDTGRSDGFLWCSTTYNFEKDGYGFCPHEALF
TMGGNAEQPCFKPFRFQGTSYDSCTTEGRTDGYRWCGTTEDYDRDKKYGFCPETAMSTVGNSEGAPCV
FPFTFLGNKYESCTSAGRS DGKMW CATTANYDDDRKWGFCPDQGYSLFLVAAHEFGHAMGLEHSQDPGAL
MAPIYTYTKNFRLSQDDIKGIQELYGASPDIDLGTGPTPTLGPVTPEICKQDIVFDGIAQIRGEIFFFKD
RFIWRVTVPRDKPMGPLLVATFWPELPEKIDAVYEAPQEEKAVFFAGNEYWIYSASTLGERPKPLTSLG
LPPDVQRVDAAFNWSKNKTYIFAGDKFWRYNEVKKKMDPGFPKLIADAWNAIPDNLDAVVDLQGGGHSY
FFKGAYYLLKENQSLKSVKFGSIKSDWLG
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



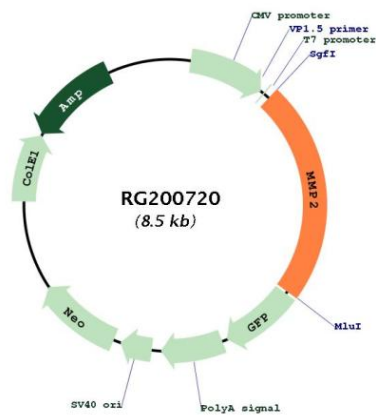
**ACCN:** NM\_004530

**ORF Size:** 1980 bp

<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<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>	<a href="#">NM_004530.1</a> , <a href="#">NP_004521.1</a>
<b>RefSeq Size:</b>	3069 bp
<b>RefSeq ORF:</b>	1983 bp
<b>Locus ID:</b>	4313
<b>UniProt ID:</b>	<a href="#">P08253</a>
<b>Cytogenetics:</b>	16q12.2
<b>Domains:</b>	FN2, hemopexin, Peptidase_M10, ZnMc
<b>Protein Families:</b>	Druggable Genome, Protease
<b>Protein Pathways:</b>	Bladder cancer, GnRH signaling pathway, Leukocyte transendothelial migration, Pathways in cancer

**Gene Summary:**

This gene is a member of the matrix metalloproteinase (MMP) gene family, that are zinc-dependent enzymes capable of cleaving components of the extracellular matrix and molecules involved in signal transduction. The protein encoded by this gene is a gelatinase A, type IV collagenase, that contains three fibronectin type II repeats in its catalytic site that allow binding of denatured type IV and V collagen and elastin. Unlike most MMP family members, activation of this protein can occur on the cell membrane. This enzyme can be activated extracellularly by proteases, or, intracellularly by its S-glutathiolation with no requirement for proteolytical removal of the pro-domain. This protein is thought to be involved in multiple pathways including roles in the nervous system, endometrial menstrual breakdown, regulation of vascularization, and metastasis. Mutations in this gene have been associated with Winchester syndrome and Nodulosis-Arthropathy-Osteolysis (NAO) syndrome. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Oct 2014]

**Product images:**


Circular map for RG200720