

## Product datasheet for **RG202460**

### **MMP1 (NM\_002421) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	MMP1 (NM_002421) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MMP1
Synonyms:	CLG; CLGN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG202460 representing NM\_002421  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCACAGCTTCTCCACTGCTGCTGCTGTTCTGGGGTGTGGTGTCTCACAGCTTCCAGCGACTC  
 TAGAAACAAGCAAGATGTGGACTTAGTCCAGAAATACCTGAAAAATACTACAACCTGAAGAATGA  
 TGGGAGGCAAGTTGAAAAGCGGAGAAATAGTGGCCAGTGGTTGAAAAATTGAAGCAAATGCAGGAATTC  
 TTTGGGCTGAAAGTACTGGAAACCAGATGCTGAAACCTGAAGGTGATGAAGCAGCCAGATGTGGAG  
 TGCCTGATGTGGCTCAGTTTGCCTCACTGAGGGGAACCTCGCTGGGAGCAAACACATCTGACCTACAG  
 GATTGAAAATTACAGCCAGATTTGCCAAGAGCAGATGTGGACCATGCCATTGAGAAAGCCTTCCAACCTC  
 TGGAGTAATGTCACACCTCTGACATTCACCAAGGTCTCTGAGGGTCAAGCAGACATCATGATATCTTTTG  
 TCAGGGGAGATCATCGGACAACCTCTCTTTTGTGACCTGGAGGAAATCTTGCTCATGCTTTTCAACC  
 AGGCCCAGGTATTGGAGGGGATGCTCATTTTGTGAAAGTGAAGGTGGACCAACAATTTTCAGAGAGTAC  
 AACTTACATCGTGTTCGGCTCATGAACTCGGCCATTCTCTTGGACTCTCCCATCTACTGATATCGGGG  
 CTTTGATGTACCTTAGCTACACCTTCAGTGGTGTGTTTCAAGTACCTAGCTCAGGATGACATTGATGGC  
 ATCCAGCCATATATGGACGTTCCCAAAATCCTGTCCAGCCCATCGGCCACAAACCCCAAAAGCGTGTGACAGT  
 AAGCTAACCTTTGATGCTATAACTACGATTCGGGGAGAAGTGTGTTCTTTAAAGACAGATTCTACATGC  
 GCACAAATCCCTTCTACCCGGAAGTTGAGCTCAATTTCAATTTCTGTTTCTGGCCACAACGCAAAATGG  
 GCTTGAAGCTGCTTACGAATTTGCCGACAGAGATGAAGTCGGTTTTTCAAAGGGAATAAGTACTGGGCT  
 GTTCAGGGACAGAATGTGCTACACGGATACCCCAAGGACATCTACAGCTCCTTTGGCTTCCCTAGAAGT  
 TGAAGCATATCGATGCTCTTTCTGAGGAAAACACTGGAAAACTACTTCTTTGTTGTAACAAATA  
 CTGGAGGTATGATGAATATAACGATCTATGGATCCAGGTTATCCCAAAATGATAGCACATGACTTTCTCT  
 GGAATTGGCCACAAGTTGATGCAAGTTCATGAAAGTGGATTTTTCTATTTCTTTTCTGGAACAAGAC  
 AATACAAATTTGATCCTAAAACGAAGAGAATTTTACTCTCCAGAAAGCTAATAGCTGGTCAACTGCAG  
 GAAAAAT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG202460 representing NM\_002421  
 Red=Cloning site Green=Tags(s)

MHSFPPLLLLLFWGVVSHSFPATLETQEQDVLVQKYLEKYYNLKNDGRQVEKRRNSGPVVEKLGKMQEF  
 FGLKVTGKPDATLKVMPQPRCGVPDVAQFVLTEGNPRWEQTHLTYRIENYTPDLPRADVDHAIEKAFQL  
 WSNVTPLTFTKVSEGDADIMISFVRGDHRDNSPFDGPGGNLAHAFQPGPIGGDAHFDEDERWTNRFREY  
 NLHRVAHELGHSLGLSHSTDIGALMYPSTYFSGDVQLAQDDIDGIQAIYGRSQNPVQPIGPQTPKACDS  
 KLTFDAITTIIRGEVMFFKDRFYMRNPFYPEVELNFISVFWPQLPNGLEAAYEFADRDEVRFKGNKYWA  
 VQGQNVLHGYPKDIYSSFGFPRTVKHIDAALSEENTGKTYFFVANKYWRVDEYKRSMDPGYPKMI AHDFP  
 GIGHKVDVAFMKDGFYFFHGTQRQYKFDPKTRILTLQKANSWFNCRKN

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_002421

**ORF Size:** 1407 bp

**OTI Disclaimer:** 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 [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_002421.2, NP\\_002412.1](#)

RefSeq Size: 1973 bp

RefSeq ORF: 1410 bp

Locus ID: 4312

UniProt ID: [P03956](#)

Cytogenetics: 11q22.2

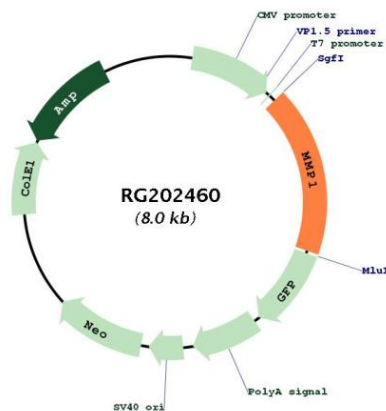
Domains: hemopexin, Peptidase\_M10, ZnMc

Protein Families: Druggable Genome, Protease, Secreted Protein

Protein Pathways: Bladder cancer, Pathways in cancer, PPAR signaling pathway

**Gene Summary:** This gene encodes a member of the peptidase M10 family of matrix metalloproteinases (MMPs). Proteins in this family are involved in the breakdown of extracellular matrix in normal physiological processes, such as embryonic development, reproduction, and tissue remodeling, as well as in disease processes, such as arthritis and metastasis. The encoded preproprotein is proteolytically processed to generate the mature protease. This secreted protease breaks down the interstitial collagens, including types I, II, and III. The gene is part of a cluster of MMP genes on chromosome 11. Mutations in this gene are associated with chronic obstructive pulmonary disease (COPD). Alternative splicing results in multiple transcript variants, at least one of which encodes an isoform that is proteolytically processed. [provided by RefSeq, Jan 2016]

### Product images:



Circular map for RG202460