

Product datasheet for **RG226017**

MMP2 (NM_001127891) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MMP2 (NM_001127891) 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)



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ORF Nucleotide Sequence:

>RG226017 representing NM_001127891
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCAATACCTGAACACCTTCTATGGCTGCCCAAGGAGAGCTGCAACCTGTTTGTGCTGAAGGACACAC
 TAAAGAAGATGCAGAAGTTCTTTGGACTGCCCCAGACAGGTGATCTTGACCAGAATACCATCGAGACCAT
 GCGGAAGCCACGCTGCGCAACCCAGATGTGGCAACTACAACCTCTCCCTCGCAAGCCCAAGTGGGAC
 AAGAACCAGATCACATACAGGATCATTGGCTACACACCTGATCTGGACCCAGAGACAGTGGATGATGCCT
 TTGCTCGTGCCTTCCAAGTCTGGAGCGATGTGACCCCACTGCGGTTTTCTCGAATCCATGATGGAGAGGC
 AGACATCATGATCAACTTTGGCCGCTGGGAGCATGGCGATGGATACCCCTTTGACGGTAAGGACGGACTC
 CTGGCTCATGCCTTCGCCCCAGGCACTGGTGTGGGGGAGACTCCCATTTTATGACGATGAGCTATGGA
 CCTTGGGAGAAGCCAAGTGGTCCGTGTGAAGTATGGGAACGCCGATGGGGAGTACTGCAAGTCCCTTT
 CTTGTTCAATGGCAAGGAGTACAACAGCTGCACTGATACCGGCCGAGCGATGGCTTCTCTGGTGTCC
 ACCACCTACAACCTTTGAGAAGGATGGCAAGTACGGCTTCTGTCCCATGAAGCCCTGTTACCATGGGCG
 GCAACGCTGAAGGACAGCCCTGCAAGTTTCCATTCCGCTTCCAGGGCACATCCTATGACAGCTGCACCAC
 TGAGGGCCGACGGATGGCTACCGCTGGTGCGGCACCCTGAGGACTACGACCGGACAAGAAGTATGGC
 TTCTGCCCTGAGACCGCCATGTCCACTGTTGGTGGAACTCAGAAGTGCCCCCTGTGTCTTCCCCTTCA
 CTTTCTGGGCAACAAATATGAGAGCTGCACCAGCGCCGCGCAGTGACGGAAGATGTGGTGTGCGAC
 CACAGCCAACACGATGATGACCGCAAGTGGGGCTTCTGCCCTGACCAAGGGTACAGCCTGTTCTCGTG
 GCAGCCCACGAGTTTGGCCACGCCATGGGGCTGGAGCACTCCAAGACCCTGGGGCCCTGATGGCACCCA
 TTTACACCTACACCAAGAACCTCCGCTGTCTCCAGGATGACATCAAGGGCATTGAGGAGCTATGGGGC
 CTCTCCTGACATTGACCTTGGCACCGGCCACCCACGCTGGGCCCTGTCACTCCTGAGATCTGCAAAA
 CAGGACATTGATTTGATGGCATCGCTCAGATCCGTGGTGGAGATCTTCTTCTTCAAGGACCGTTTCAAT
 GGCGGACTGTGACGCCACGTGACAAGCCCATGGGGCCCTGCTGGTGGCCACATTCTGGCCTGAGCTCCC
 GGAAAAGATTGATGCGGTATACGAGGCCCCACAGGAGGAGAAGGCTGTGTTCTTTGACGGGAATGAATAC
 TGGATCTACTCAGCCAGCACCTGGAGCGAGGGTACCCCAAGCCACTGACCAGCCTGGGACTGCCCCCTG
 ATGTCCAGCGAGTGGATGCCGCTTTAACTGGAGCAAAAACAAGAAGACATACATCTTTGCTGGAGACAA
 ATCTGGAGATACAATGAGGTGAAGAAGAAAATGGATCCTGGCTTCCCCAAGCTCATCGCAGATGCCTGG
 AATGCCATCCCCGATAACCTGGATGCCGCTGTGGACCTGCAGGGCGCGGTACAGCTACTTCTTCAAGG
 GTGCTATTACCTGAAGCTGGAGAACCAAGTCTGAAGAGCGTGAAGTTTGAAGCATCAATCCGACTG
 GCTAGGCTGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG226017 representing NM_001127891
 Red=Cloning site Green=Tags(s)

MQYLNTFYGCPKESCNLFVLKDTLKKMQKFFGLPQTGDLQNTIETMRKPRCNPDPVANYNFFPRPKPKWD
 KNQITYRIIGYTPDLDPETVDDAFARAFQVWSDVTPLRFSRIHDGEADIMINFRWEHGDGYPFDGKDG
 LAHAFAPGTGVGDSHFDDDELWTLGEGQVVRVKYGNADGEYCKFPFLFNGKEYNSCTDTGRSDGFLWCS
 TTYNFEKDGKYGFCPHEALFTMGNAEQPCKFPFRFQGTSYDSCTTEGRTDGYRWCGTTEDYDRDKKYG
 FCPETAMSTVGGNSEGAPCVFPFTFLGNKYESCTSAGRSKGKMWCAATANYDDDRKWGFCPDQGYSLFLV
 AAHEFGHAMGLEHSQDPGALMAPIYTYTKNFRLSQDDIKGIQELYGASPDIDLGTPTLGPVTPPEICK
 QDIVFDGIAQIRGEIFFKDRFIWRTVTPRDKPMGPLLVATFWPELPEKIDAVYEAPQEEKAVFFAGNEY
 WIYSASTLERGYPKPLTSLGLPPDVQRVDAAFNWSKNKTYIFAGDKFWRYNEVKKKMDPGFKLIADAW
 NAIPDNLDAVVLDQGGHSYFFKGAYYLKLENQSLKSVKFGSIKSDWLGC

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001127891

ORF Size: 1830 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_001127891.2](#), [NP_001121363.1](#)

RefSeq Size: 3402 bp

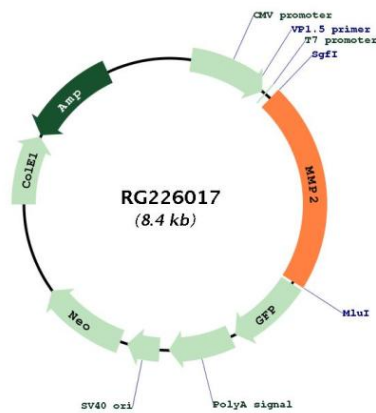
RefSeq ORF: 1833 bp

Locus ID: 4313

UniProt ID: [P08253](#)

Cytogenetics:	16q12.2
Protein Families:	Druggable Genome, Protease
Protein Pathways:	Bladder cancer, GnRH signaling pathway, Leukocyte transendothelial migration, Pathways in cancer
Gene Summary:	<p>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]</p>

Product images:



Circular map for RG226017