

Product datasheet for **RG238982**

MMP2 (NM_001302508) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MMP2 (NM_001302508) 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:

>RG238982 representing NM_001302508.
 Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGGATCGCC
ATGCAGAAGTTCTTTGGACTGCCCCAGACAGGTGATCTTGACCAGAATACCATCGAGACCATGCGGAAG
CCACGCTGCGGCAACCCAGATGTGGCCAACTACAACCTTCTCCCTCGCAAGCCCAAGTGGGACAAGAAC
CAGATCACATACAGGATCATTGGCTACACACCTGATCTGGACCCAGAGACAGTGGATGATGCCTTTGCT
CGTGCCTTCCAAGTCTGGAGCGATGTGACCCCACTGCGGTTTTCTCGAATCCATGATGGAGAGGCAGAC
ATCATGATCAACTTTGGCCGCTGGGAGCATGGCGATGGATACCCCTTTGACGGTAAGGACGGACTCCTG
GCTCATGCCTTCGCCCCAGGCACTGGTGTGGGGGAGACTCCCATTTTGTGACGATGAGCTATGGACC
TTGGGAGAAGGCCAAGTGGTCCGTGTGAAGTATGGGAACGCCGATGGGGAGTACTGCAAGTTCCTTTC
TTGTTCAATGGCAAGGAGTACAACAGCTGCACTGATACCGGCCGACGCGATGGCTTCTCTGGTGTCC
ACCACCTACAACCTTTGAGAAGGATGGCAAGTACGGCTTCTGTCCCATGAAGCCCTGTTCCACATGGGC
GGCAACGCTGAAGGACAGCCCTGCAAGTTCCATTCCGCTTCCAGGGCACATCCTATGACAGCTGCACC
ACTGAGGGCCGACGGATGGCTACCGCTGGTGGCGCACCACTGAGGACTACGACCCGACAGAAGTAT
GGCTTCTGCCCTGAGACCGCCATGTCCACTGTTGGTGGGAACCTAGAAGGTGCCCTGTGTCTTCCCC
TTCACCTTCTGGGCAACAAATATGAGAGCTGCACCAGCGCCGGCCGAGTGACGGAAAGATGTGGTGT
GCGACCACAGCCAACTACGATGATGACCGAAGTGGGCTTCTGCCCTGACCAAGGGTACAGCCTGTTT
CTCGTGGCAGCCACGAGTTTGGCCACGCCATGGGGCTGGAGCACTCCCAAGACCTGGGGCCCTGATG
GCACCCATTTACCTACACCAAGAAGTCCGCTGTCCCAGGATGACATCAAGGGCATTGAGGAGCTC
TATGGGGCCTCTCTGACATTGACCTTGGCACCGGCCACCCACCCAGCTGGGCCCTGTCACTCCTGAG
ATCTGCAACAGGACATTGTATTTGATGGCATCGCTCAGATCCGTGGTGAGATCTTCTTCAAGGAC
CGGTTTCAATTTGGCGGACTGTGACGCCACGTGACAAGCCATGGGGCCCTGCTGGTGGCCACATTCTGG
CCTGAGCTCCCGAAAAGATTGATGCGGTATACGAGGCCACAGGAGGAGAAGGCTGTGTTCTTTGCA
GGGAATGAATACTGGATCTACTCAGCCAGCACCTGGAGCGAGGGTACCCCAAGCCACTGACCAGCCTG
GGACTGCCCTGATGTCCAGCGAGTGGATGCCGCTTTAACTGGAGCAAAAACAAGAAGACATACATC
TTTGTGGAGACAAATTCTGGAGATAAATGAGGTGAAGAAGAAAATGGATCCTGGCTTCCCAAGCTC
ATCGCAGATGCCTGGAATGCCATCCCCGATAACCTGGATGCCGCTGGACCTGCAGGGCGGCGGTAC
AGCTACTTCTTCAAGGGTGCCTATTACCTGAAGCTGGAGAACCAAGTCTGAAGAGCGTGAAGTTGGA
AGCATCAAATCCGACTGGCTAGGCTGC
ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAAAC
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Protein Sequence:

>Peptide sequence encoded by RG238982
 Blue=ORF Red=Cloning site Green=Tag(s)

```
MQKFFGLPQTGDLQNTIETMRKPRCGNPDVANYNFFPRKPKWKNQITYRIIGYTPDLDPETVDDAFA
RAFQVWSDVTPPLRFRIHDGEADIMINFRWEHGDGYPFDGKDLLAHAFAPGTGVGGDSHFDDDELWT
LGEGQVVRVKYGNADGEYCKFPFLFNGKEYNSCTDGRSDGFLWCSTTYNFEKDKYGFPCHEALFTMG
GNAEGQPCKPFRFQGTSYDSCCTEGRTDGYRWCCTEDYDRDKKYGFPCPETAMSTVGGNSEGAPCVFP
FTFLGNKYESCTSAGRSDGKMWCAATANYDDDRKWGFCPDQGYSLFLVAAHEFGHAMGLEHSQDPGALM
APIYTYTKNFRLSQDDIKGIQELYGASPDIDLGTGPTPTLGPVTPEICKQDIVFDGIAQIRGEIFFKD
RFIWRVTVRDKPMGPLLVATFWPELPEKIDAVYEAPQEEKAVFFAGNEYWIYSASTLERGYPKPLTSL
GLPPDVQRVDAAFNWSKNKTYIFAGDKFWRYNEVKKKMDPGFKLIADAWNAIPDNLDAVVDLQGGH
SYFFKGAYYLKLENQSLKSVKFGSIKSDWLGC
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIIRSNAIVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
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Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_001302508

ORF Size: 1752 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).

RefSeq: [NM_001302508.1](#), [NP_001289437.1](#)

RefSeq Size: 3230 bp

RefSeq ORF: 1755 bp

Locus ID: 4313

UniProt ID: [P08253](#)

Cytogenetics: 16q12.2

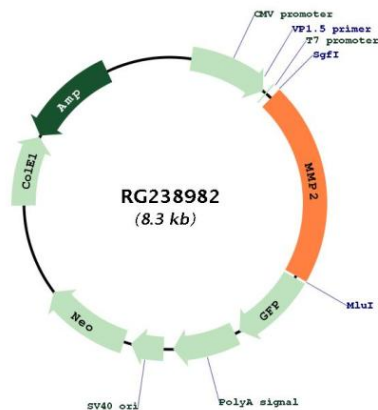
Protein Families: Druggable Genome, Protease

Protein Pathways: Bladder cancer, GnRH signaling pathway, Leukocyte transendothelial migration, Pathways in cancer

MW: 66.2 kDa

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 RG238982