

Product datasheet for **SC116989**

MMP9 (NM_004994) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MMP9 (NM_004994) Human Untagged Clone
Tag:	Tag Free
Symbol:	MMP9
Synonyms:	CLG4B; GELB; MANDP2; MMP-9
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene sequence for NM_004994 edited
GAATTCGGCACGAGGATGAGCCTCTGGCAGCCCCTGGTCTGGTCTCTGGTGTGGG
TGCTGCTTTGCTGCCCCAGACAGCGCCAGTCCACCCCTTGTGCTCTTCCCTGGAGACCTG
AGAACCAATCTCACCCGACAGGCAGCTGGCAGAGGAATACCTGTACCGCTATGGTTACACT
CGGGTGGCAGAGATGCGTGGAGAGTCGAAATCTCTGGGGCCTGCGCTGCTGCTTCTCCAG
AAGCAACTGTCCCTGCCCCGAGACCGGTGAGCTGGATAGCGCCACGCTGAAGGCCATGCGA
ACCCACCGGTGCGGGGTCCCAGACCTGGGCAGATTCCAAACCTTTGAGGGCGACCTCAAG
TGGCACCACCACAACATCACCTATTGGATCCAAAACCTACTCGGAAGACTTGCCGCGGGCG
GTGATTGACGACGCCCTTTCGCCGCGCCTTCGCACTGTGGAGCGCGGTGACGCCGCTCACC
TTCCTCGCGTGTACAGCCGGGACGACATCGTCATCCAGTTTGGTGTGCGGGAGCAC
GGAGACGGGTATCCCTTCGACGGGAAGGACGGGCTCCTGGCACACGCCTTCTCCTGGC
CCCGCATTACAGGGAGACGCCCATTTTCGACGATGACGAGTTGTGGTCCCTGGCAAGGGC
GTCGTGGTTCCAACCTCGGTTTGGAAACGCAGATGGCGCGGCTGCCACTTCCCCTTCATC
TTCGAGGGCCGCTCCTACTCTGCCTGCACCACCGACGGTTCGCTCCGACGGCTTGCCTGG
TGCAGTACCACGGCCAACACTACGACACCGACCGGTTTGGCTTCTGCCCCAGCGAGAGA
CTCTACACCCGGGACGGCAATGCTGATGGGAAACCTGCCAGTTTCCATTCATCTCCAA
GGCAATCCTACTCCGCCTGCACCACGGACGGTCGCTCCGACGGTACCCTGGTGCGCC
ACCACCGCAACTACGACCGGGACAAGCTTTCGGCTTCTGCCCGACCCGAGCTGACTCG
ACGGTGTATGGGGGCAACTCGGCGGGGAGCTGTGCGTCTTCCCCTTCACTTTCCTGGGT
AAGGAGTACTCGACCTGTACCAGCGAGGGCCGCGGAGATGGGCGCCTCTGGTGCCTACC
ACCTCGAACTTTGACAGCGACAAGAAGTGGGGCTTCTGCCCGACCAAGGATACAGTTTG
TTCCTCGTGGCGCGCATGAGTTCGGCCACGCGTGGGCTTAGATCATTCTCAGTGCCG
GAGGCGCTCATGTACCCTATGTACCCTTCACTGAGGGGCCCCCTTGCATAAAGGACGAC
GTGAATGGCATCCGGCACCTCTATGGTCCTCGCCCTGAACTGAGCCACGGCCTCCAACC
ACCACCACACCGCAGCCACGGCTCCCCGACGGTCTGCCCCACCGACCCCCACTGTC
CACCCCTCAGAGCGCCCCACAGCTGGCCCCACAGGTCCCCCTCAGCTGGCCCCACAGGT
CCCCCACTGCTGGCCCTTCTACGGCCACTACTGTGCCTTTGAGTCCGGTGGACGATGCC
TGCAACGTGAACATCTTCGACGCCATCGCGGAGATTGGGAACCAGCTGTATTTGTTCAAG
GATGGGAAGTACTGGCGATTCTCTGAGGGCAGGGGAGCCGCGCCAGGGCCCTTCTT
ATCGCCGACAAGTGGCCCGCTGCCCCGCAAGCTGGACTCGGTCTTTGAGGAGCCGCTC
TCCAAGAAGCTTTTCTTCTCTCTGGGCGCCAGGTGTGGGTGTACACAGGCGCGTGGTG
CTGGGCCCGAGGGCTCTGGACAAGCTGGCCTGGGAGCCGACGTGGCCAGGTGACCGGG
GCCCTCCGGAGTGGCAGGGGGAAGATGCTGCTGTTACAGCGGGCGGCGCCTCTGGAGGTT
GACGTGAAGGCGCAGATGGTGGATCCCCGGAGCGCCAGCGAGGTGGACCGGATGTTCCCC
GGGGTGCCTTTGGACACGCACGACGTCTTCCAGTACCGAGAGAAAGCCTATTTCTGCCAG
GACCGCTTCTACTGGCGCGTGAGTTCGCGGAGTGAGTTGAACCAGGTGGACCAAGTGGGC
TACGTGACCTATGACATCCTGCAGTGCCTGAGGACTAGGGCTCCCGTCTGCTTTGGCA
GTGCCATGTAATCCCCACTGGGACCAACCCTGGGAAGGAGCCAGTTTGCCGGATACAA
ACTGGTATTCTGTTCTGGAGGAAAGGAGGAGTGGAGTGGGCTGGGCCCTCTCTTCTCA
CCTTTGTTTTTTTGGAGTGTCTAATAAACTTGGATTCTCTAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAACTCGAC
    
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004994 unedited
 GTAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGATGAGCCTCTGGCAGCC
 CCTGGTCTGGTCTCTGGTGTGGGCTGCTGCTTTGCTGCCCCAGACAGCGCCAGTC
 CACCCTTGTGCTCTTCCCTGGAGACCTGAGAACCAATCTACCCGACAGGCAGCTGGCAGA
 GGAATACCTGTACCGCTATGGTTACACTCGGGTGGCAGAGATGCGTGGAGAGTCGAAATC
 TCTGGGGCCTGCGCTGCTGCTTCTCCAGAAGCAACTGTCCTGCCCGAGACCGGTGAGCT
 GGATAGCGCCACGCTGAAGGCCATGCGAACCCACGGTGGCGGGTCCCAGACCTGGGCAG
 ATTCCAAACCTTTGAGGGCGACCTCAAGTGGCACACCACCAACATCACCTATTGGATCCA
 AAATACTCGGAAGACTTGCCGCGGGCGGTGATTGACGACGCTTTGCCCGCCTTCGC
 ACTGTGGAGCGCGGTGACGCCGCTCACCTTCACTCGCGTGTACAGCCGGGACGCAGACAT
 CGTCATCCAGTTTGGTGTGCGGAGCACGGAGACGGGTATCCCTTCGACGGGAAGGACGG
 GTCCTGGCACACGCTTTCCTCTGGCCCCGGCATTACAGGGAGACGCCATTTTCGACGA
 TGACGAGTTGTGGTCCCTGGCAAGGGCGTCGTGGTTCCAACCGGTTTGGAAACGCAGA
 TGGCGCGNCTGCCACTTCCCTTCATCTTCGNAGGCCGCTCTACTCTGCCTGCACCAC
 CGACGGTCGCTCCGACGGCTTGCCTGGTGCAGTACCACGGCCAACTACGACACCACGCA
 CCGNNTTGGCTTCTGCCAGCGAGAGACTCTACACCCGGGACNGGCATGCTGATGGGAA
 ACCTGNACAGTTNCAATTCATCTTCAGGNCCATACTACTNCGCTGCCCN

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_004994 unedited
 TTTTTTTTTTTNNTNNTNNTTTTTTTTTTTTTGNNTTTTTTTTTTTTCGATTTCTT
 CAGCAACTTCCACAAAAACAAGGTGTACAACACGGGCCAGTCCACTCCCTCCTCCTT
 TCCTCCAGAACAGATACCAGTTTGTATCCGGCAAACCTGGCTCCTTCCCCAGGTTGGTCCC
 AGCGGGGATCCACATGGCACTGCCAACCCACGACGGCCCCCCTAGTCCTCAGGGCACTG
 CCGGCACGTACAGGTCCACGTCCCCCACTTGGCCACCTGGTACAACCTCACTTCGGGAA
 CTCACGCTTATTCTTAATCCGTTCTCGCCCCAAATAGGCTCTCTCCTTCTCCTGCTAC
 CCGTCCCCCGGTGCCACACGCTCCCCGGTTGACCTTCTGTCCCCCTCCTGGCCCTCC
 CGGTGATTTACCTCCTCTGCCTCCACTCCCTCACCTCCATAGGTCTCGTTCTCTCACC
 ATCTCCTCTCTCCCCCTGCCCTCCCCAGGGTACCTCCCCCTGCGCCACGTCCGCC
 TCCCCATGCCTCTTTTTGTTACACCCCCCGCTTTCGATTTATTGCCGCACCTGAGTAC
 ACCCTCACCCAGCTGCCCATTTACCCATCTAATCCTTCCCTGTCAGCCGTCCCC
 CCCCCACCGCACCTCCCGCCTGCCACCGCCCTGCCGCCCCACCCCTCCCCCAAC
 CCCAAAAGCGCCCTGCCATCTTGGCCTCCCTCCTTCTTTATCAAACAACACAACT
 CTGCCCTTCCCTCGTAAATTTACTATTGCCACCCCAACCCCGTATGACACGCATA
 CCATGTTGATATCCGCCATATTTACCCATGAACTTACATTGTCCACTTACGGGCC
 CGCATTATGGGCTACCCTCTTGGCCCCCCCCCTGTCTTCACTCCTCCCCGCCCTCCC
 CACTCTTCCCTCCTCCCCGCCCTCCACCG

Restriction Sites:

NotI-NotI

ACCN:

NM_004994

Insert Size:

2500 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 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](#)

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_004994.2](#), [NP_004985.2](#)

RefSeq Size: 2387 bp

RefSeq ORF: 2124 bp

Locus ID: 4318

UniProt ID: [P14780](#)

Cytogenetics: 20q13.12

Domains: FN2, hemopexin, Peptidase_M10, ZnMc, PT

Protein Families: Druggable Genome, Protease

Protein Pathways: Bladder cancer, Leukocyte transendothelial migration, Pathways in cancer

Gene Summary: Proteins of the matrix metalloproteinase (MMP) 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. Most MMP's are secreted as inactive proproteins which are activated when cleaved by extracellular proteinases. The enzyme encoded by this gene degrades type IV and V collagens. Studies in rhesus monkeys suggest that the enzyme is involved in IL-8-induced mobilization of hematopoietic progenitor cells from bone marrow, and murine studies suggest a role in tumor-associated tissue remodeling. [provided by RefSeq, Jul 2008]