

Product datasheet for **RC202460**

MMP1 (NM_002421) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MMP1 (NM_002421) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MMP1
Synonyms:	CLG; CLGN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC202460 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCACAGCTTCTCCACTGCTGCTGCTGCTGTTCTGGGGTGTGGTGTCTCACAGCTTCCAGCGACTC
 TAGAAACACAAGAGCAAGATGTGGACTTAGTCCAGAAATACCTGGAAAAATACTACAACCTGAAGAATGA
 TGGGAGGCAAGTTGAAAAGCGGAGAAATAGTGGCCAGTGGTTGAAAAATTGAAGCAAATGCAGGAATTC
 TTTGGGCTGAAAGTGACTGGGAAACCAGATGCTGAAACCTGAAGGTGATGAAGCAGCCAGATGTGGAG
 TGCCTGATGTGGCTCAGTTTGTCTCACTGAGGGGAACCTCGCTGGGAGCAAACACATCTGACCTACAG
 GATTGAAAATTACACGCCAGATTTGCCAAGAGCAGATGTGGACCATGCCATTGAGAAAGCCTTCAAACCTC
 TGGAGTAATGTCACACCTCTGACATTCACCAAGGTCTCTGAGGGTCAAGCAGACATCATGATATCTTTTG
 TCAGGGGAGATCATCGGGACAACCTCTCTTTTGTGGACCTGGAGGAAATCTTGCTCATGCTTTTCAACC
 AGGCCCAGGTATTGGAGGGGATGCTCATTTTGTGAAGATGAAAGGTGGACCAACAATTTTCAGAGAGTAC
 AACTTACATCGTGTTCGGCTCATGAACTCGGCCATTCTCTTGGACTCTCCATTCTACTGATATCGGGG
 CTTTGATGTACCCCTAGCTACACCTTCAGTGGTGTGTTTCAAGTACCTAGCTCAGGATGACATTGATGGC
 ATCCAGCCATATATGGACGTTCCCAAAATCCTGTCCAGCCCATCGGCCACAACCCCAAAAGCGTGTGACAGT
 AAGCTAACCTTTGATGCTATAACTACGATTCGGGGAGAAGTGTGTTCTTTAAAGACAGATTCTACATGC
 GCACAAATCCCTTCTACCCGGAAGTTGAGCTCAATTTCAATTTCTGTTTCTGGCCACAACCTGCCAAATGG
 GCTTGAAGCTGCTTACGAATTTGCCGACAGAGATGAAGTCCGGTTTTTCAAAGGGAATAAGTACTGGGCT
 GTTCAGGGACAGAATGTCTACACGGATACCCCAAGGACATCTACAGCTCCTTTGGCTTCCCTAGAAGT
 TGAAGCATATCGATGCTCTTTCTGAGGAAAACACTGGAAAACTACTTCTTTGTTGTAACAAATA
 CTGGAGGTATGATGAATATAAACGATCTATGGATCCAGTTATCCCAAAATGATAGCACATGACTTTCTCT
 GGAATTGGCCACAAGTTGATGCAAGTTTTCATGAAAGATGGATTTTTCTATTTCTTTCATGGAACAAGAC
 AATACAAATTTGATCCTAAAACGAAGAGAATTTTACTCTCCAGAAAGCTAATAGCTGGTCAACTGCAG
 GAAAAAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC202460 protein sequence
 Red=Cloning site Green=Tags(s)

MHSFPPLLLLLFWGVVSHSFPATLETQEQVDLVQKYLEKYYNLKNDGRQVEKRRNSGPVVEKLMQMEF
 FGLKVTGKPD AETLKVMKQPRCGVPDVAQFVLTEGNPRWEQTHLTYRIENYTPDLPRADVDHAIKAFQL
 WSNVTPLTFTKVSEQADIMISFVRGDHRDNSPFDGPGGNLAHAFQPGPIGGDAHFDEDERWTNNFREY
 NLHRVAHELGHSLGLSHSTDIGALMYPSTYFSGDVQLAQDDIDGIQAIYGRSQNPVQPIGPQTPKACDS
 KLTFDAITTRIRGEVMFFKDRFYMRTPNPFYPEVELNFI SVFWPQLPNGLEAAYEFADRDEVRFKGNKYWA
 VQGQNVLHGYPKDIYSSFGFPRTVKHIDAALSEENTGKTYFFVANKYWRVDEYKRSMDPGYPKMI AHDFP
 GIGHKVDVAFMKDGFYFFHGTQRQYKFDPKTKRILTLQKANSWFNCRKN

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6247_h06.zip

Restriction Sites:

Sgfl-Mlul

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 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.

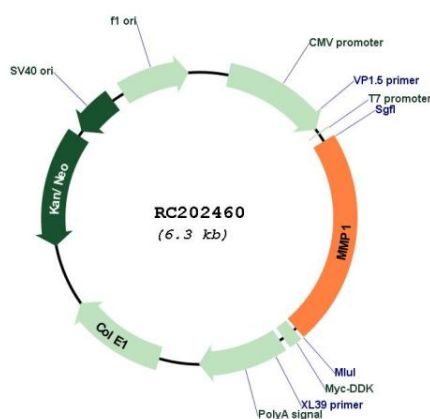
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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.

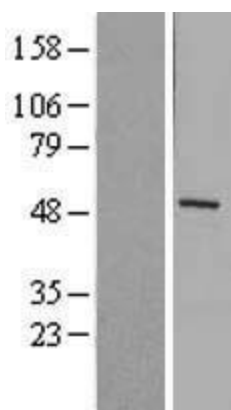
RefSeq: [NM_002421.2, NP_002412.1](#)
RefSeq Size: 2081 bp
RefSeq ORF: 1410 bp
Locus ID: 4312
UniProt ID: [P03956](#)
Cytogenetics: 11q22.2
Domains: hemopexin, Peptidase_M10, ZnMc
Protein Families: Druggable Genome, Protease, Secreted Protein
Protein Pathways: Bladder cancer, Pathways in cancer, PPAR signaling pathway
MW: 54 kDa

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]

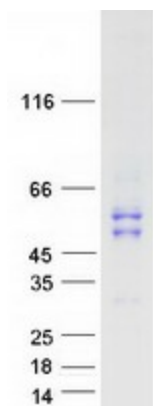
Product images:



Circular map for RC202460



Western blot validation of overexpression lysate (Cat# [LY419340]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202460 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MMP1 protein (Cat# [TP302460]). The protein was produced from HEK293T cells transfected with MMP1 cDNA clone (Cat# RC202460) using MegaTran 2.0 (Cat# [TT210002]).