

Product datasheet for **MR210322**

Plod1 (NM_011122) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Plod1 (NM_011122) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Plod1
Synonyms:	2410042F05Rik; AI854890; AV007929; Lh1; Plod
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide
Sequence:**

>MR210322 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGCGGTCCCTGTGCTCCTGGCCCCGTTGGCCTGGCTTCTTCTGGTCCAGGCGAAGGATGACGCCAAGC
 TAGAGGACAACCTTCTGGTCTCACTGTGGCCACAAAAGAGACTGAGGGCTTCCGCCGTTCAAGCGTTC
 AGCTCAGTTCTTCAACTACAAGATCCAGTCACTGGGCCTGGGGGAGGACTGGAGTGTGGATGGAGGACCA
 GCAGCAGCAGGTGGAGGACAGAAGGTTCCGGCTGTGAAGAAGGCACTGGAAAAGCACGCAGACAAGGAAG
 ACCTGGTTATTCTTTCGTTGACAGTTATGACGTGGTGTTCCTCGGGACCCCGGAACTCTTAAAGAA
 GTTCCAGCAGGCCAAGAGCCAGGTGGTCTTCTCCGCAGAGGAGCATATCTACCCGACCCGGAGGCTGGAG
 GCCAAGTATCCACAGTCCCGACGGCAAGCGGTTCTGGGCTCTGGAGGCTTCATTGGTTATGCCCCCA
 GCCTCAGCAAACCTGGTGGCCGAGTGGGAAGGCCAGGACAGTGACAGCGACCAGCTCTTTTATACCAAGAT
 CTTCTTGAACCCGAGAAGAGGGAGCAAATCAATATCAGCCTGGACCATCGCTGCCGAATCTTCCAGAAC
 CTGGATGGAGCCTTGGATGAAGTTGTGCTCAAGTTTGAATGGGCCACGTGAGAGCACGAAATCTGGCCT
 ATGACACCCTCCCAAGTGGTTCATGGCAATGGGCCACCAAGCTGCAGCTGAACTACCTGGGCAACTA
 CATTCTCGATTCTGGACCTTCGAGACGGGCTGCACCGTGTGTGACGAGGGCCTACGGAGCCTCAAGGGC
 ATTGGGATGAAGCTCTCCCACTGTCTGGTCCGGTGTGTTTCATTGAGCAGCCACACCATTTCTATCCT
 TGTTTTCTCGCGGTGCTGCGCCTACGATACCCTCAGAAACAGATGCGGCTCTTCATTACAACAGGA
 ACGGCACCACAACTTCAAGTAGAGCAGTTCCTGGCGGACACGGCAGTGAGTACCAGTCTGTGAAGCTA
 ATGGGTCTGAGGTGCGCATGGCCAACGCCGACCCAGGAACATGGGCGCAGACCTGTGCCGTGAGGACC
 AAACCTGCACCTACTACTTCAGTGTGGATGCTGATGTGGCTCTGACGGAGCCGAACAGCTAAGGCTCTG
 GATTGAACAAAACAAGAATGTCATTGCGCCTCATGACCCGCCACGGGAGGCTCTGGTCCAACCTCTGG
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 GCAGAACGTAGACCTTTTCCACTACAGCAAGCTGGATTCCGACATGAGTTTCTGCGCCAATGTCCGACAG
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 CCACCCACCTACATAATGATCTCTGGGAGGTGTTGAGCAACCTGAGGACTGGAAAGAAAAGTACATCCA
 TGAGAATTACCAAGGCCCTGGCGGGGAAGCTGGTGGAGACGCCTTGTCGGATGTCTACTGGTCCCC
 ATCTTCACGGAGCGGCCTGTGATGAGCTGGTGGAGGAGATGGAACACTATGGCCAGTGGTCTCTGGGTG
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 TGATGCCCCACATGACGCCTCTACCTTACCCTCAACATAGCCCTGAACAGGGTTGGGGAAGATTATGA
 GGGCGGAGGTTGCCGATTTCTGCGCTACAACCTGCTCCGTGAGGGCACCAAGGAAGGGCTGGGCCCTCTG
 CACCCCGGGCGGCTCACACTATCACGAGGGGCTTCTACTACCAAGGGCACGGCTACATTGCTGTGT
 CTTTCGTCGATCCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR210322 protein sequence
 Red=Cloning site Green=Tags(s)

MRSLLLLAPLAWLLL VQAKDDAKLEDNLLVL TVATKETEGFRFRKRS AQFFNYKIQSLGLGEDWSVDGGP
 AAAGGGQKVRLLK KALEKHADKEDLVILFVDSYDVV FASGPPELLKKFQQAKSQVVFSAEEHIYPDRRLE
 AKYPTVPDGKRF LGSGGFIGYAPSLSKLVAEWEGQDSDSDQLFYTKIFLNPEKREQINISLDHRCRIFQN
 LDGALDEVVLKFEMGHVRARNLAYDTLPVVVHNGNGPTKQLNLYLGNYPWFETGCTVCDEGLRSLKG
 IGDEALPTVLVGVFIEQPTPFLSLFLLRLLRLRYPQKQMR LFIHNQERHHKLQVEQFLAHEGSEYQSVKL
 VGPEVRMANADARNMGADLCRQDQTCTYYFSVDADVALTEPNSLRLLIEQNKVIAPLMTRHGR LWSNFW
 GGLSADGYARSEDYVDIVQRRVGVWVNPYISNIYL IKGSA LRAELQNVDLFHYSKLSDMSFCANVRQ
 QEVF MFLTNRHTFGHLLSLDNYQTTHLHNDLWEVFSNPEDWKEKYIHENYTKALAGKLVETPCPDVYWFP
 IFTEAACDELVEEMEHYQWSLGDNKDNRIQGGYENVPT IDIHMNQITFEREWHKFLVEYIAPMTEKLYP
 GYYTRAQFDLAFVVRYPDEQPSLMPHHDASTFTVNIALNRVGEDYEGGGCRFLRYNCSVRAPRKGWALL
 HPGRLTHYHEGLPTTKGTRYIAVSFVDP

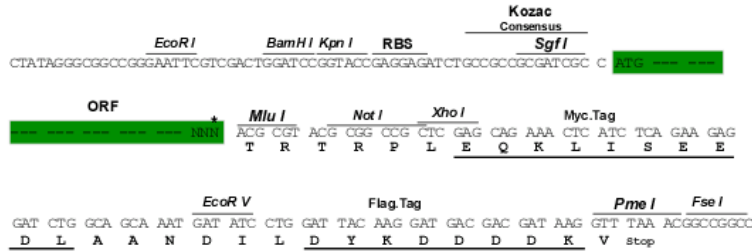
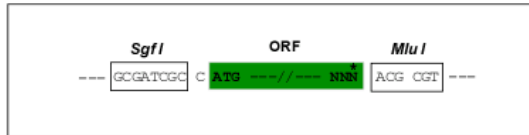
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

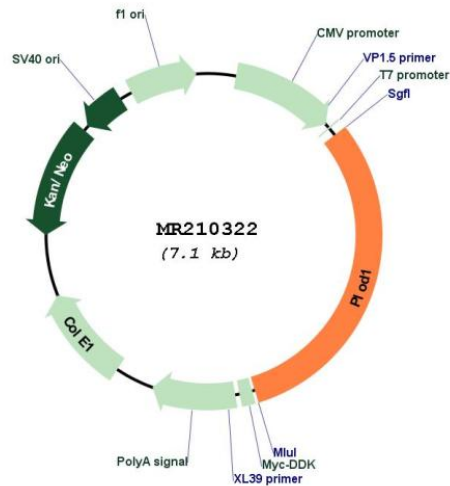
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:


ACCN: NM_011122

ORF Size: 2187 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_011122.3](#)

RefSeq Size: 3268 bp

RefSeq ORF: 2187 bp

Locus ID: 18822

UniProt ID: [Q9R0E2](#)

Cytogenetics: 4 78.57 cM

MW: 83.6 kDa

Gene Summary: Part of a complex composed of PLOD1, P3H3 and P3H4 that catalyzes hydroxylation of lysine residues in collagen alpha chains and is required for normal assembly and cross-linking of collagen fibrils (PubMed:27119146). Forms hydroxylysine residues in -Xaa-Lys-Gly- sequences in collagens (By similarity). These hydroxylysines serve as sites of attachment for carbohydrate units and are essential for the stability of the intermolecular collagen cross-links (PubMed:27119146).[UniProtKB/Swiss-Prot Function]