Gene: VMA21 - Sequence: NG_016761.1
Transcript: NM_001017980.3 - Protein: NP_001017980.1
LRG: LRG_860t1 - Date : Thursday 14th January, 2016

1^{st} line: Base numbering. Full stops for intronic +/- 5, 10, 15...
2^{nd} line: Base sequence. lower case Introns, upper case Exons
3^{rd} line: Amino acid sequence. Printed on FIRST base of codon
4^{th} line: Amino acid numbering. Numbered on 1^{st} and increments of 10

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Exon 1 | Start: 5001 | End: 5177 | Length: 176

.    .    .    .    .    .    .    .    .    .    .    .
gacgaggaccagtgttcacgcgagttcaggggggcggcgtagccgccgcccgcccaggagg

.    .    .    .    .    .    .    .    .    .    .    .
accatgttgcgcggcaagtcccggctcaacgtggagtggctgggctactcgccaggcctg

.    .    .    .    .    .    .    .    .    .    .    .
ctcctcgagcacaggcccctcctggcagggcgcacgccgcggagccaccgccggtaagtc

.    .    .    .    .    .    .    .    .    .    .    .
atgtgagcgcccgcccccgcgccggcaacagccctgcgtcgctgcggcgcgccgcgccgc

.    .    .    .    .    .    .    .    .    .    .    .
gccgcgcctgcgtactgtggcccgccgcccggcgcgaacgggcacttccggcgcgaacgg

     |-119     |-109     |-99      |-89      |-79      |-69
GCACTTCCGGCGCGAACCGCTACTTCCGGTGCGAACCGCCTCGGCCGTTCCCTCGCGGAG

     |-59      |-49      |-39      |-29      |-19      |-9
CTTACTGAGCGCGGCCGCCGAGCCCAGCTCCGCCGCCGAGCGCCTGTGCCGGCACGGCTA

    |1        |11       |21       |31       |41       |51
CACCATGGAGCGCCCGGATAAGGCGGCGCTGAACGCACTGCAGCCTCCTGAGTTCAGgta
    M  E  R  P  D  K  A  A  L  N  A  L  Q  P  P  E  F  R
    |1                          |11

 .    .    .    .    .    .    .    .    .    .    .    .
gccctgagcggggcctggaccgcgaggcggactggccccagcctggagcagggcttgagg

 .    .    .    .    .    .    .    .    .    .    .    .
gaaggccctagctgaatgggtgggcgtgaggtctggaccccggggacctggcctcaggga

 .    .    .    .    .    .    .    .    .    .    .    .
agggggcggggaaagcaggttggagcctgagacgtctaaactcccggccccgaactttcg
```

. . . .
ctcgggaacaagggatccggggtcatggggaataggtcagtgggccttcagctcatgctc

. . . .
ctatcctagcactttctctcgctgtgtctatattgcagtctctttcattaccgcagg

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Exon 2 | Start: 11447 | End: 11556 | Length: 109

.    .    .    .    .    .    .    .    .    .    .    .
gtttcttcacttagtttgttcacccagcttgttggcagttgatctgaggtgccctgacgc

.    .    .    .    .    .    .    .    .    .    .    .
ttcgtcttacactggatatgaatgacagtccctaaaggtggtgtataatcttcatgttcc

.    .    .    .    .    .    .    .    .    .    .    .
agctcaagaaattcccactacccacagctggttctctaggatcttcggattacgagtccc

.    .    .    .    .    .    .    .    .    .    .    .
tgcctgtgatcttcctcctgcatagcatctcatttgtggatgtttatagtttcagggaca

.    .    .    .    .    .    .    .    .    .    .    .
taagagcgtttggatatgactgtgcaggttctgattttctctttgtttactttattccag

       |61       |71       |81       |91       |101      |111
AAATGAAAGCTCATTAGCATCTACACTGAAGACGCTCCTGTTCTTCACAGCTTTAATGAT
 N  E  S  S  L  A  S  T  L  K  T  L  L  F  F  T  A  L  M  I
       |21                         |31

       |121      |131      |141      |151      |161   .    .
CACTGTTCCTATTGGGTTATATTTCACAACTAAATCTTACATATTTGAAGgtaatcttag
 T  V  P  I  G  L  Y  F  T  T  K  S  Y  I  F  E  G
       |41                         |51

    .    .    .    .    .    .    .    .    .    .    .    .
acccattaaaacaagatgttttcccccaatttaagattctgtgcttttatgacctcttta

    .    .    .    .    .    .    .    .    .    .    .    .
tatctttaaactgggtattcttatttttttcttgtttagcttttcaaaaaatcatattgc

    .    .    .    .    .    .    .    .    .    .    .    .
tcataatgagtctttatgaaataacttattgtttcagcttgacagttttcctatggtttt

    .    .    .    .    .    .    .    .    .    .    .    .
ctgtgaaatagcttgcaaatcctttctcttagtacctttaaagaataggggttggctga

    .    .    .    .    .    .    .    .    .    .
catgggaggaggaatttgggggaatggactttagtgtcagataacggaa
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Exon 3 | Start: 12732 | End: 17180 | Length: 4448

.    .    .    .    .    .    .    .    .    .    .    .
ttcacggtgctagccaggatggtttccatctcctgacctcgtgatctgcccgtcttggcc

.    .    .    .    .    .    .    .    .    .    .    .
tcccaaagtgctgggattacaggcgtgagccactgcacccggccaacataatgttcttaa

.    .    .    .    .    .    .    .    .    .    .    .
tatatagaaggtactcatatcttttagtgaatactttattcattaccacccaaaatatta

.    .    .    .    .    .    .    .    .    .    .    .
ctttttaattgcctgactagttaaataaatacatcataaaaattaggatgctttgttttt

.    .    .    .    .    .    .    .    .    .    .    .
ttttttttgtactttggtaaattttgcaataaaatggaaactgtttttttctcttgatag

       |171      |181      |191      |201      |211      |221
GCGCCCTTGGGATGTCCAATAGGGACAGCTATTTTTACGCTGCTATTGTTGCAGTGGTCG
  A  L  G  M  S  N  R  D  S  Y  F  Y  A  A  I  V  A  V  V  A
                |61                           |71

       |231      |241      |251      |261      |271      |281
CCGTCCATGTGGTGCTGGCCCTCTTTGTGTATGTGGCCTGGAATGAAGGCTCACGACAGT
  V  H  V  V  L  A  L  F  V  Y  V  A  W  N  E  G  S  R  Q  W
                |81                           |91

       |291      |301  |*1       |*11      |*21      |*31
GGCGTGAAGGCAAACAGGATTAAAGTGAACATCACCTTTTTATAGCATTAAATTCATTTT
  R  E  G  K  Q  D  *
                |101

   |*41      |*51      |*61      |*71      |*81      |*91
TTAAAATGATAAATGCTGGAGGGGGCCATCTGATTTGAATAAAGTTGAAAGAACATGTTA

   |*101     |*111     |*121     |*131     |*141     |*151
AAGTCAGTCTTAAGGAGTCACGTTTGAGTATGTAAATTTTGATCTTTCTAATATGTTGGT

   |*161     |*171     |*181     |*191     |*201     |*211
TTGTATATTCAGTTTTAACTGTATGAATCTGATTTGCAAATGAGAATTTGGAAAAGTTAG

   |*221     |*231     |*241     |*251     |*261     |*271
TTACAAAGAAATATGTTAATTTAATTAGACAATACTCTGGAAGGAATTTTATCTTCTTTC
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   |*281      |*291      |*301      |*311      |*321      |*331
AACAAAACATGTTTTATAGTATTCTGACTTACGGTTGCTTTTGAGTTTTACTCATTTGGA

   |*341      |*351      |*361      |*371      |*381      |*391
TATATTAAGATGCACACAGTGAAGCAAATTAAACTCCACTTTACGCTGGAATGCTTTCTT

   |*401      |*411      |*421      |*431      |*441      |*451
TAGCATGAAAATACCAGGTCCTTGGATTTGGGATTTTAATTTCCTATGGAAAGTTGCTTA

   |*461      |*471      |*481      |*491      |*501      |*511
AATTGTGGACACTGGAATTAATCTGAATGTCACTGAGGAATTTCACATGAAGTGTAATCC

   |*521      |*531      |*541      |*551      |*561      |*571
CTAGTCAATAAGAATTATCCATTACATTATTTTATGGGAAAACTAGGCTAAATTACATCC

   |*581      |*591      |*601      |*611      |*621      |*631
ATTCAGGTAAAAGGACCTTAGCTTACTGAAGGATCTAAAGAGCAAAGCAAAGATCTCACT

   |*641      |*651      |*661      |*671      |*681      |*691
ACTCAAACACTCAGCCTGCTTCCTTCAAGTCCCCTTGCAGGCCAGCTTTGTGCTTTGCAG

   |*701      |*711      |*721      |*731      |*741      |*751
ACCAACTTTTTAATGAGATACTTTGCTTCCTCATTCAACATTGAAGCTAGGCTTCAATTA

   |*761      |*771      |*781      |*791      |*801      |*811
AAAGGTTCGAGGAAGCTCCATTTAAAATTGTTTTTTTTACTATTTTTTAAAATTGTAGTG

   |*821      |*831      |*841      |*851      |*861      |*871
TATATGATAGGAATTTGCATTTAAATATGTTCATTTTTGCATATGTTAGGAGTGGAAACA

   |*881      |*891      |*901      |*911      |*921      |*931
ATCTGGAAAACATTTTTTTTTCATCCAAAAAGTATTCTCCTTGGGCATATCTGATGGAAA

   |*941      |*951      |*961      |*971      |*981      |*991
AAAACCTTGATTTTATTTTCGTATCTTTAGTCTGTGTTCTTTCTAGTTATTTGGTACTAA

   |*1001     |*1011     |*1021     |*1031     |*1041     |*1051
TTATGTGCAATCTAAAAACACTCCCACAAGTATTTGTTTTTTAATTATAAAATCATAGTA

   |*1061     |*1071     |*1081     |*1091     |*1101     |*1111
TATGTTCTTTGTAGAAAACTGGAAAAATACATATTCAAACAGGAAAAAAAATCAAAATTC

   |*1121     |*1131     |*1141     |*1151     |*1161     |*1171
CCCATAATGTTGCCATCTAAAAATAACCTCTATTTTAGTTGATATCCCGTATTCATTTTT
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   |*1181     |*1191     |*1201     |*1211     |*1221     |*1231
GAAAGCCATTCCTTAATGCTAGTTTGATACACACTAAAAGTTTAGCTTACAAGTTCAAAT

   |*1241     |*1251     |*1261     |*1271     |*1281     |*1291
TCTGCCAGCTTTTCCTGACAGCTATTTGCATTTTTTTCAGATGAGTGATTATTGGCCATT

   |*1301     |*1311     |*1321     |*1331     |*1341     |*1351
TTCTTTTTCTTTTTCTTTATTTTATTTATTTATTTTTTTGAGACAGAGTTTTGCTCTGTT

   |*1361     |*1371     |*1381     |*1391     |*1401     |*1411
GCCCAGGCTGGAGTGCAGTGGTGCAATCTCGGCTCACTGCAACCTCTGCCTCCTGGGTTC

   |*1421     |*1431     |*1441     |*1451     |*1461     |*1471
AAGTGATTCTCCACCTCAGCCTCCCAAGTAGCTGGGACTACGGATGCCTGCCACCACGCC

   |*1481     |*1491     |*1501     |*1511     |*1521     |*1531
TGGCTAATTTTTTTTTGTATTTTTTTGTAGAGACGGGGTTTCACCATGTTGTCCAGGCTA

   |*1541     |*1551     |*1561     |*1571     |*1581     |*1591
ATCTTGAACTTGTGACCTCAGGTGATCCACCCGCCTCGGCCTCCGAAAGTGCTGGGATTA

   |*1601     |*1611     |*1621     |*1631     |*1641     |*1651
CAGGCGTGAGCTACCACGCCCGGCCTTATTGACCATTTTCTAAATAAGCACATTCTATCT

   |*1661     |*1671     |*1681     |*1691     |*1701     |*1711
TTATTCTCTTAAAATTCAAATTTTCTGTTACTGATAATCCTAATACTAGGATTCTTGCTT

   |*1721     |*1731     |*1741     |*1751     |*1761     |*1771
AAGTATGTGAAACCATTACCGATTTGTTGTTCACATTTATTTTTTATGTTGTGAAACTGG

   |*1781     |*1791     |*1801     |*1811     |*1821     |*1831
ACTAAAGGAATAGAGGGATGATTAGTCATAAAAGTCAAATAGCATTTGTGTTTAACTGTT

   |*1841     |*1851     |*1861     |*1871     |*1881     |*1891
GAGAAAAGTGAAAGATCAGTATGATTATTATGGAACTGTTTTTAATTCTTGCTTAAAGAC

   |*1901     |*1911     |*1921     |*1931     |*1941     |*1951
TACAATTTTAGTATAATGACATTTGAGTCTAGGGTAGTATGTGGTAGATTTCTAGATGGT

   |*1961     |*1971     |*1981     |*1991     |*2001     |*2011
CCCTAATTAAGAAGTATTGTTGTATTTAGAATTGTCCACCTAATTTCTTTTTATATAATG

   |*2021     |*2031     |*2041     |*2051     |*2061     |*2071
CCAAGGTATTTCTTGTGCTTTTGGGATCTTATGCTGTTTGTAAAATGTTACTGTCCAATG
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   |*2081     |*2091     |*2101     |*2111     |*2121     |*2131
TTGGATTATTGTTTTGGTTTCAGGCATTTGCTGAATAGGTGATGATACATGGGTATTTTT

   |*2141     |*2151     |*2161     |*2171     |*2181     |*2191
CTGCAAGTATTTAAACCAGGGGCATATGCAAAGGCAGTTGTAATTTCCTCTTGGAAAAAG

   |*2201     |*2211     |*2221     |*2231     |*2241     |*2251
CGCCAAATGTTTGAAGGTTAAAATCAAATGCTAGGGTTGATATTTAGGCTTATAACAAAA

   |*2261     |*2271     |*2281     |*2291     |*2301     |*2311
TAGGCTTGTTTTCAAAGCAGTTTTTTCCTAGAGTTTTAACTGTTAACTCACTAGTTTGCT

   |*2321     |*2331     |*2341     |*2351     |*2361     |*2371
GCTGTTTTTAACTATGTTAAATAACATATGGTATTTGGCAAATAGATTTATTTTTCAAAA

   |*2381     |*2391     |*2401     |*2411     |*2421     |*2431
TGTCTCACTAGTTTCCTTTTACACAATGTATATACTTCAAGATGTATAGAAAGGAAAGCT

   |*2441     |*2451     |*2461     |*2471     |*2481     |*2491
ACAGTTGAGCCCTTATACATGTTTTAAGGTAGAAATATGTTCCCTATTGTTTGAAAACTG

   |*2501     |*2511     |*2521     |*2531     |*2541     |*2551
ATTGTAAGAATAACCTCAGTTAGGAGATATAACTTGAAGTGTCAGTCCAAACTACTGATT

   |*2561     |*2571     |*2581     |*2591     |*2601     |*2611
TAACCCTATTTACGGTAACACATTACCTTCCTCACCTCCTGTTTGGCCCTGGAGAATGTA

   |*2621     |*2631     |*2641     |*2651     |*2661     |*2671
GTCCTTTTTCTCATTTGTGTTGAGAAATGAAAAGTCTGCTGTAGAATGTATCTGATGTCA

   |*2681     |*2691     |*2701     |*2711     |*2721     |*2731
TTAGTTCTTCAAATGGATACCATTGTACATATAACAGTAGAATTTGGTTTGGGGTTGTTA

   |*2741     |*2751     |*2761     |*2771     |*2781     |*2791
GTGAAAAAAAATTTAAACCTGCCATTAAAAATCCCCATGTTTCATGGAAATCTAACAGAA

   |*2801     |*2811     |*2821     |*2831     |*2841     |*2851
ATACATTGTAATAATTAGAACATTTTGTTTTCTTTTTTCTTTTTTTTTTTTTCGAGACGG

   |*2861     |*2871     |*2881     |*2891     |*2901     |*2911
AGTTTTGCCCTTCTTGCCCAGGCTGGAGTGCAAGGGCGCAATCTCGGCTCGCTGCAACCT

   |*2921     |*2931     |*2941     |*2951     |*2961     |*2971
CCGCCTCCCGGGTTCAAGCAGTTCTCCTGCCTCAGCCCCCTGAGTACCTCAGATGACAGG
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   |*2981     |*2991     |*3001     |*3011     |*3021     |*3031
TGCGTGCCACCACACCCGGCTAATTTTTGTATTTTTAGTAGAGACGGGGTTTCACCATGT

   |*3041     |*3051     |*3061     |*3071     |*3081     |*3091
TAGCCAGGCTAGTCTCGAACTCCTGACCTCAGGTGATCCACCCGCCTCCGCCTCCCAAAG

   |*3101     |*3111     |*3121     |*3131     |*3141     |*3151
TGCTGGGATTACAGGTATCAGCCACCGTGCCTGGCCTAATAATTGGAACATTTTCATCAT

   |*3161     |*3171     |*3181     |*3191     |*3201     |*3211
GAAAATGTCATCAGCTTTGCCAAAAGAAACAACCAATTGACTTGTTTGGCGTTTGTTTTC

   |*3221     |*3231     |*3241     |*3251     |*3261     |*3271
CATTTTCATGTCAATTTTATGTATACAGTTAGAATACCCAAGGAGACCACTAAAATCAGT

   |*3281     |*3291     |*3301     |*3311     |*3321     |*3331
TAAACAAGTAGGGTATATACAAAGAAAGATGAAACCCGAAAGTACATAAAAAGGATTTAA

   |*3341     |*3351     |*3361     |*3371     |*3381     |*3391
ATCCGATTTTAGATGTACCTAGTGTGTATTTCTTATCTCTAGACAAGTTCATGTTTATTG

   |*3401     |*3411     |*3421     |*3431     |*3441     |*3451
TTTAATTTATGCCCAAGTGAAGTTGTAAACTTATGGTTCAACTCTGACACAGAATTTGTC

   |*3461     |*3471     |*3481     |*3491     |*3501     |*3511
ACTTGTCTGAGGTCAGTGGCAGGTTTCTCTGCTGTCAAGCACTCTGTGTCACCCACCAGA

   |*3521     |*3531     |*3541     |*3551     |*3561     |*3571
TTAGTATAACTATTAATTCAGACTGTACTCCTATGTTTAAGATAATTTTTACAAGAGCTG

   |*3581     |*3591     |*3601     |*3611     |*3621     |*3631
GCTGAAGCAGCACATTAGTAACCTGACAAGATTTCTTTTTCCCTTTTCAGGGGGAAAGGG

   |*3641     |*3651     |*3661     |*3671     |*3681     |*3691
TCACCTTAAAAATAAATTATTTTCAGGGACTTTGGGAATCTAATGATAAATATTACACAT

   |*3701     |*3711     |*3721     |*3731     |*3741     |*3751
AATCTATGAATAGCTTAATCCTTTATATATTCCTTAAAATAGGAATTCCTCGACATCACT

   |*3761     |*3771     |*3781     |*3791     |*3801     |*3811
CCTGGCCACACTTTCCTTGCCTGTGTTGTTGCTATGTGTATTTGAAAGTAATATCTGCAT

   |*3821     |*3831     |*3841     |*3851     |*3861     |*3871
TCCTTTTAAGATGTTCTGTAAGTCATATTTGTCAGTTATACAGAGTAGTCTTCCTTTTCC
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   |*3881     |*3891     |*3901     |*3911     |*3921     |*3931
CCACGTTCAGTGTAATCTCACTGAACAGTAATAATAGCAATAGCTAACAACATCTGCACA

   |*3941     |*3951     |*3961     |*3971     |*3981     |*3991
GCACCTTACAGTTTGCAAAGAACGTTCACACATTCTCATTTGAGTTTTGCATAGTGAACC

   |*4001     |*4011     |*4021     |*4031     |*4041     |*4051
TGTTACGAGATGTCTCTTGACGTCGATGCTAAAAGTGTTAGAATCTTTACATCACTAGAG

   |*4061     |*4071     |*4081     |*4091     |*4101     |*4111
TCATTGAATATGCTGTAGTATTGAATAGTGCCCTGACTAGGGGGAGGATTTGGATGTGCT

   |*4121     |*4131     |*4141     |*4151     |*4161     |*4171
GCATTTCAAGCCGTGTATAATCATCAAAATGGGGGGCTTGAGTTCTTTAGCTACTTGAAT

   |*4181     |*4191     |*4201     |*4211     |*4221     |*4231
CCGATTTACTTCTGTTAAGTGATGCTTTTCTAACCGTTTTCTGGATGGATTTTGTATTCA

   |*4241     |*4251     |*4261     |*4271     |*4281     |*4291
CTATATTGTAGCTTGTAATTTGTATAAATGTACCATCTGATGTCATTAAAAAAAGTGTTT

   |*4301     .    .    .    .    .    .    .    .    .
GTAGTGCTActttgctgtgtcctgattcaattaatgttttattaaccgctgtgtttttaa

   .    .    .    .    .    .    .    .    .    .    .    .
aaatttgtttgcctgcttctcattttataacatgtagaatatgtacagagctcactttaa

   .    .    .    .    .    .    .    .    .    .    .    .
aaaatttgttcgttggcctctgtttgtgctatgtagattatatagagagctgtcaaggat

   .    .    .    .    .    .    .    .    .    .    .    .
aagtttttatgcagtaaatgtcaaccagaaatgctcaaactgattgggagtgtgggggag

   .    .    .    .    .    .    .    .    .    .    .    .
gggtgttgagctgtaaagggctggttatacttcgtctggggtgggcttcaaatgccccta

   .    .
aaggagagt
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LRG Parser: Version: 1.3, Version Date: 11/02/2015
Reader: Version: 1.3, Version Date: 11/02/2015
Writer: Version: 1.3, Version Date: 11/02/2015
Control: Version: 1.3, Version Date: 11/02/2015
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