

Gene: ASL - Sequence: NG_009288.1

Date : February 9, 2015

1st line: Base numbering. Full stops for intronic +/- 5, 10, 15...

2nd line: Base sequence. lower case Introns, upper case Exons

3rd line: Amino acid sequence. Printed on FIRST base of codon

4th line: Amino acid numbering. Numbered on 1st and increments of 10

Exon 1 | Start: 5000 | End: 5068 | Length: 68

```
. . . . .
gggcctgatgtcatagcctctaccctggccccgagtctccagtcctcgctgtctgctg

. . . . .
accacagcacgaacgccagcgcactaccctcctcaaccccagcccaggcccccttccccgt

. . . . .
cggggtccccccaaccctttccccgcccgttccccgccccggggcgcgcttagcctccag

. . . . .
ctcagcgggaggtatccccgcccacggccaggattggaggatggaggcaacgcccacccc

. . . . .
gccggggcgccctcctattggcgcggccgtcgccaggggtggggacaggaccggcggctgc

|-109  |-99    |-89    |-79    |-69    |-59
GACGCCATCCCGGCCAGAAAAGCCCTGGCCAGTGGCGGGCGCGACACTATCCGTGCGGCC

|-49
AGGCGGAGgtgagtgcgcggcggccggatgggcgggacgggcgtggaggacgccgagcac

. . . . .
cgtggcgcgcgctcacgtccgcgtccccaagggtcgctccctcaagcgcagtgccag

. . . . .
aactcggagccagcccggccgggggaccctgctggccaaggaggtcgtcagtcgggtct

. . . . .
tgtcttccagaccggaggaccgaagcttccggacgacgaggaaccgccaacatggcct

. . . . .
cggaggtgagtgggacctcggggactccggtcctcctagcctccaaaggagagagtgggg
```

. .
gcgccagac

Exon 2 | Start: 5250 | End: 5305 | Length: 55

.
ctcctattggcgcggccgtcgccaggggtggggacaggaccggcggctgctgacgccatc
.
ccggccagaaaagccctggccagtggcggggcgcgacactatccgtgcccaggcggagg
.
tgagtgcgcggcggccggatgggcggggacgggcgtggaggacgccagcacctggtgcgcg
.
cgctcacgtccgcgtccccaagggtgcgctccctcaagcgagtgcccagaactcggag
.
ccagcccggcccgggggaccctgctggccaaggaggtcgtcagtcgggtcttgtcttcca
|-39 |-29 |-19 |-9 |1 |11 .
ACCCGAGGACCGAAGCTTCCGGACGACGAGGAACGCCCAACATGGCCTCGGAGgtgag
M A S E
|1
.
tgggacctcggggactccggtcctcctagcctccaaaggagagagtgggggcgcagacc
.
tgcctcgggcccaccctgctgggaatcgccctccaggaagcaatttgaaaattacctagg
.
aagcctgcacccccagccctcccgggcgcatcatctggagcccagcagtcacctttacca
.
ggactcaccagtatccgcaggcagcccttgtggcaaaccaccaaccacactactaggg
.
gtagagtggctctgccctcacctcacagtgatgcctgcctggccaggaaggtggc

Exon 3 | Start: 11014 | End: 11209 | Length: 195

```
. . . . .
cctgggaggcagagtttgcagtgagctgagatggcaccactgtactccagcctggccgac

. . . . .
aaagtgagactctgtctcaaaaaaaaaaaaaaagaacccaaacttttggtgttcagccat

. . . . .
gttcccatgctcactcccagggtggtgactctgggaaggtctcagcctccttgtctgccc

. . . . .
agttagaatgatctgatgccctgctaccatcagacttgataagtttcccaaagactctt

. . . . .
tgcaagaagcactgttcttgagggtggaggagagactaattgttcttgctctcctggcca

      |21      |31      |41      |51      |61      |71
AGTGGGAAGCTTTGGGGTGGCCGTTTGTGGGTGCAGTGGACCCCATCATGGAGAAGTTC
S  G  K  L  W  G  G  R  F  V  G  A  V  D  P  I  M  E  K  F
              |11                      |21

      |81      |91      |101     |111     |121     |131
AACGCGTCCATTGCCTACGACCGGCACCTTTGGGAGGTGGATGTTCAAGGCAGCAAAGCC
N  A  S  I  A  Y  D  R  H  L  W  E  V  D  V  Q  G  S  K  A
              |31                      |41

      |141     |151     |161     |171     |181     |191
TACAGCAGGGGCCTGGAGAAGGCAGGGCTCCTCACCAAGGCCGAGATGGACCAGATACTC
Y  S  R  G  L  E  K  A  G  L  L  T  K  A  E  M  D  Q  I  L
              |51                      |61

      |201
CATGGCCTAGACAAGgtacttgccgtggcccaagccccaccaaggccccttccctgtgg
H  G  L  D  K

. . . . .
ccccaggctcccaccaaaccctgagcaaacagtgcagtggtgcccatctgtggtttcac

. . . . .
attgaactaattatataactcaagtgtgtttaactgtgtgccttgatgactgcctctctc
```

.
 catcctttaatgaccctgtggccacatggctcatgggtaaaggtgtgctgggcctgag

 atgccccctcccagggtgcgcttcaggactcagctcctgggcaggacagtcagtcacc

 agggatagggtgggac

Exon 4 | Start: 11579 | End: 11663 | Length: 84

.
 agcaaacagtgcagtgtgcccacatctgtggtttcacattgaactaattatataactcaagt

 gctgtttaactgtgtgccttgatgactgcctctctccatcctttaatgaccctgtggcc

 cacatggctcatgggtaaaggtgtgctgggcctgagatgccccctcccagggtgcgcttc

 caggactcagctcctgggcaggacagtcagtcaccagggatagggtgggaccaaggcag

 gggctctcttggtgtgatgcctgctcacctgaccccggcattgctgctaccactaca
 |211 |221 |231 |241 |251 |261
 GTGGCTGAGGAGTGGGCCAGGGCACCTTCAAAGTGAAGTCCAATGATGAGGACATCCAC
 V A E E W A Q G T F K L N S N D E D I H
 |71 |81
 |271 |281 |291
 ACAGCCAATGAGCGCCGCTGAAGgtacgaccctggagccccaccgctttccttgctc
 T A N E R R L K
 |91

 ccctctccaccttgcccagggccactttgagcattagcaccattctgtttacttcgccat

 tggcagacagcatgtgagacctcaggacatgagccaggcacccctgggtcatgcctataat

.
 cctagcactttgggaggctgaggtgggaggattgcttgagaccaggagttcgagaccagc

 ctgggcaacataatgaggtcccacagctacaaaaattaaaaaagaaaagaaaaaagaa

 caggcctcagcagaaatggcgagag

Exon 5 | Start: 12091 | End: 12148 | Length: 57

.
 agccaggcaccctggctcatgcctataatcctagcactttgggaggctgaggtgggagga

 ttgcttgagaccaggagttcgagaccagcctgggcaacataatgaggtcccacagctaca

 aaaattaaaaaagaaaagaaaaaagaacaggcctcagcagaaatggcgagagatttgg

 ggaggaccggagccctgggggtatggaggtaggttggcagggtgatgaggaaaactgcc

 ctgcctgggttgactcctctgggggtatagaccgtgaccctgggtctcccttcacctcca

	301	311	321	331	341
	GAGCTCATTGGTGCAACGGCAGGGAAGCTGCACACGGGACGAGCCGGAATGACCAGgtg				
E	L	I	G	A	T
A	G	K	L	H	T
G	R	S	R	N	D
Q					
	101			111	

.
 ctttagccctccacccctgctccgtgttgtcccaaccttgaggagcccagggggcagt

 tagagttctgcagcggctcctggctcctcagggaagcaacacatcggcctccctgagcacc

 atctcctccttgacaggtggtcacagacctcaggctgtgggatgcggcagacctgctcca

 cgctctcgggcctcctctgggagctcattaggaccatggtggatcgggcagaggcgtgag

.
tcctacaggacacccagggggcagacagaggtgtgatggaagcctgaacaggagacc

Exon 6 | Start: 12288 | End: 12386 | Length: 98

.
gggggtatggaggtaggttggcagggtgatgaggaactgcctgcctgggttgactcc

.
tctgggggtatagaccgtgaccctgggtctcccttcacctccaggagctcattggtgcaa

.
cggcagggaagctgcacacgggacggagccggaatgaccaggtgctttagcccctccacc

.
ccctgctccgtgttgtcccaacctgaggagcccagggggcagttagagttctgcagcgg

.
tcctggctcctcagggaagcaacacatcggcctccctgagcaccatctcctccttgaca

 |351 |361 |371 |381 |391 |401
GTGGTCACAGACCTCAGGCTGTGGATGCGGCAGACCTGCTCCACGCTCTCGGGCCTCCTC
V V T D L R L W M R Q T C S T L S G L L
 |121 |131

 |411 |421 |431 |441
TGGGAGCTCATTAGGACCATGGTGGATCGGGCAGAGGCgtgagtcctacagggaaccca
W E L I R T M V D R A E A
 |141

.
gggggcagacagaggtgtgatggaagcctgaacaggagacctagggggcaggggtgaaca

.
gcgtgggggtgccaggccctgggggacaggggcacccagaactccaggatcgaggcaga

.
gcagccaggagtgggccatttcctgcaggccccaataactcccatgccagtctagctcagc

.
aggcagagaagactaacccttcgtggggctgggtgcggtggctcacgcctgtaatctcag

.
cactttgggaggccgaggtgggtggatcacctgaggtca

Exon 7 | Start: 15796 | End: 15874 | Length: 78

.
ctattctggccctgctcggagatgctgagtgacagaggctggacttgggggtgtttctgg

.
caaagcctcactgcaggaagccccacagctcaggcccagtccttggttcacacggtccca

.
cttcagcttcttttgccttaagactgatttgtccctgggagatcaccagatccctcat

.
tcaggtggagtgctgcagcgtgacactttttccaggggtgacccaggcctgcagggttcc

.
agtgtcacaggcaggccttgcatgagcctccacccgagcttctgctcctcctctccaca

 |451 |461 |471 |481 |491 |501
GGAACGTGATGTTCTTCTCCCGGGGTACACCCATTTGCAGAGGGCCCAGCCCATCCGCTG
E R D V L F P G Y T H L Q R A Q P I R W
 |151 |161

 |511 |521
GAGCCACTGGATTCTGAGgtgagccagggtgaggtgcaggggctgtgctagaggggaggac
S H W I L S
 |171

.
cccggctgccctgaccctcctgcccttggttcccacagccacgccgtggcactgaccg

.
agactctgagcggctgctggaggtgcggaagcggatcaatgtcctgcccctggggaggtg

.
ggtgaggctccagtgccccgagggcctggtgggggtggctgctgcatagccttagggatt

.
gacagagctgggaagtgcagagtgggacagaaaaccgccttatctgctcagcgggggact

. . . .
ctgcatggagccccagctc

Exon 8 | Start: 15955 | End: 16033 | Length: 78

.
ggagatcaccagatccctcattcaggtggagtgctgcagcgtgacactttttccaggggt

.
gaccaggcctgcagggttcagtgacaggcaggccttgcagcctccacccagagc

.
ttctgctcctcctctccacaggaacgtgatgttctcttccgggttacaccatttgc

.
agagggcccagccatccgctggagccactggattctgaggtgagccaggtgaggtgcag

.
gggctgtgctagaggggaggacccggctgccctgaccctcctgcccctggcttccaca

 |531 |541 |551 |561 |571 |581
CCACGCCGTGGCACTGACCCGAGACTCTGAGCGGCTGCTGGAGGTGCGGAAGCGGATCAA
H A V A L T R D S E R L L E V R K R I N
 |181 |191

 |591 |601
TGTCTGCCCCCTGGGGAGgtgggtgaggctccagtgccccgagggcctggtgggggtggc
V L P L G S
 |201

.
tgctgcatagccttagggattgacagagctgggaagtgcagagtgggacagaaaaccgcc

.
ttatctgctcagcgggggactctgcatggagccccagctctcgctaaggtgacgaccaag

.
ccattgaatgtgtctgagcagggccagagccctccagcaaggctcctggcaagcccagcc

.
tgctgccctcagcctgacatgtgggaacatgtgtcaggagacaagtgtcctgcacccagg

Exon 10 | Start: 16940 | End: 17003 | Length: 63

```
. . . . .
agcaccgcgaagacctgcagacacacctgaaaccagagggcaggggcctgtggctcctg

. . . . .
gtgaaaccttcattcattgcctatgggcactgaggtcatcaagttcaggggtcactcatg

. . . . .
gcagggatgcctggtactgagagactcagggtcctgcctccctcctgggactgtgcaaa

. . . . .
agatccctccccccagctgttgccccaccctgatcaggggagggggctgggcaacctagt

. . . . .
tgggggagagggggccactccctgtcctccagcttagccctgcttcctccacccccca

      |661      |671      |681      |691      |701      |711
AACTCAACTTTGGGGCCATCACTCTCAACAGCATGGATGCCACTAGTGAGCGGGACTTTG
  L  N  F  G  A  I  T  L  N  S  M  D  A  T  S  E  R  D  F  V
      |221                        |231

. . . . .
TGGgtgagtcctggggagccagtcacctgtgcctcactttagtccttcagcccag
A

. . . . .
cttctctccagtttctccacacctccacggacaggctggttggtgatattgtacac

. . . . .
tgaagtataaaccttaaatgggtaaagtgggtggggcatggtggttcacatgccagca

. . . . .
ctggccaacatggtgaaacccatctctactaagaatacaaaatttagctgggtgtgtgg

. . . . .
tggcaggtgcctgtaatcccagctactcaggagtcttgaggccagagaatcacttgaacc

.
cagg
```

Exon 11 | Start: 18018 | End: 18133 | Length: 115

```
. . . . .
gataaattgtatgtgagtgataactcagtaaagctgggtttattttaaacaacaacaataa
. . . . .
caaaaaacacgctaggtgcaatggcttacgtttgtaatcctagcactttgggaggcctaaa
. . . . .
gcagaaggattgcttgagcccacaagtttcagaacagcttgggcgacatagcacgacccc
. . . . .
atctttgcgaaaaatgaaaatttagccgggtccccccaccgctaactcctcctgcccc
. . . . .
ctgtatggctcaggctgggtggggatgggagaggcctgggtgactgggaaccttttctccca
|721      |731      |741      |751      |761      |771
CCGAGTTCCTGTTCTGGGCTTCGCTGTGCATGACCCATCTCAGCAGGATGGCCGAGGACC
E F L F W A S L C M T H L S R M A E D L
|241      |251
|781      |791      |801      |811      |821      |831 .
TCATCCTCTACTGCACCAAGGAATTCAGCTTCGTGCAGCTCTCAGATGCCTACAGgtaag
I L Y C T K E F S F V Q L S D A Y S
|261      |271
. . . . .
ccctgaactgccacctccatctgccgctgccggcctctgtatccccgcgcgcgcggac
. . . . .
gtggctgccttcctccccgtcccacccctccgccagacctggccattgcggcgctggacc
. . . . .
agccaagggtccagcccccttcagcgccagcacctctgtcccagcacgggaagcagcctg
. . . . .
atgccccagaagaaaaaccccgacagtttggagctgatccggagcaaggctgggcgtgtg
. . . . .
tttgggcgggtgagcaaggcagggggaggggcggggcctctgggctgatggtgggt
```

Exon 12 | Start: 18302 | End: 18387 | Length: 85

```
. . . . .
ggaaccttttctcccagccgagttcctgttctgggcttcgctgtgcatgacccatctcag
. . . . .
caggatggccgaggacctcatcctctactgcaccaaggaattcagcttcgtgcagctctc
. . . . .
agatgcctacaggtaagccctgaactgccacctccatctgccgctgccggcctctgtatc
. . . . .
ccccgccgcccggacgtggctgccttcctccccgtcccacccctccgccagacctggc
. . . . .
cattggcgctggaccagccaagggtccagccccttcagcgcagcacctctgtcccca
      |841      |851      |861      |871      |881      |891
CACGGGAAGCAGCCTGATGCCCCAGAAGAAAAACCCGACAGTTTGGAGCTGATCCGGAG
  T  G  S  S  L  M  P  Q  K  K  N  P  D  S  L  E  L  I  R  S
      |281                                |291

      |901      |911      . . . . .
CAAGGCTGGCGTGTGTTGGGCGGgtgagcaaggcagggggaggggcggggcctctggg
  K  A  G  R  V  F  G  R
      |301

. . . . .
ctgatggtgggtggccaggggggcaggatcccgggtccagcccctgtgcctccctcttc
. . . . .
cgcagtgtgccgggctcctgatgacctcaagggaacttcccagcacctacaacaagact
. . . . .
tacaggtgcgaggccgggggaggcctggctagtacgtgccagttctcagggtcttggcac
. . . . .
actcaggcagggccccaccccgggattgccatacatcctcccatcctgtgcacacagctc
. . . . .
catccgtggctgcccttgaactctct
```

Exon 13 | Start: 18487 | End: 18547 | Length: 60

```
. . . . .
ccgcccgcggacgtggctgccttcctccccgtcccacccctccgccagacctggccattg
. . . . .
cggcgctggaccagccaagggtccagccccttcagcgccagcacctctgtccccagcacg
. . . . .
ggaagcagcctgatgccccagaagaaaaaccccgacagtttgagctgatccggagcaag
. . . . .
gctgggcgtgtgtttgggcgggtgagcaaggcagggggaggggcggggcctctgggctga
. . . . .
tggtgggtggccaggggggcaggatcccgggtccagcccctgtgcctccctcttcccgca
|921      |931      |941      |951      |961      |971
TGTGCCGGGCTCCTGATGACCCTCAAGGGACTTCCCAGCACCTACAACAAAGACTTACAG
C  A  G  L  L  M  T  L  K  G  L  P  S  T  Y  N  K  D  L  Q
          |311                      |321

. . . . .
gtgcgaggccgggggaggcctggctagtacgtgccagttctcagggctctggcacactca
. . . . .
ggcagggccccaccccgggattgccatacctcccatcctgtgcacacagctccatcc
. . . . .
gtggctgcccttgaactctctgcccttcctttgttggggatttgagtgttcttcccatgg
. . . . .
aaggcagtggggatgcctcagtgggggggtggggctgtggggaccctgggtgccaggggg
. . . . .
ctgctaggccctcacctcctgccatgtgcctcccaggaggacaaggaagctgtgtttgaa
g
```

Exon 14 | Start: 18823 | End: 18907 | Length: 84

.
 cagcacctacaacaaagacttacaggtgcgaggccgggggaggcctggctagtacgtgcc

 agttctcagggtcttggcacactcaggcagggtcccccaccccggttgcatacatcctc

 ccatcctgtgcacacagctccatccgtggctgcccttgaactctctgcccttcctttgtt

 ggggtattgagtgttcttcccatggaaggcagtggggatgcctcagtggggggtggggc

 tgtggggaccctgggtgccaggggtgctagggccctcacctcctgcatgtgcctccca
 |981 |991 |1001 |1011 |1021 |1031
 GAGGACAAGGAAGCTGTGTTTGAAGTGTGAGCACTATGAGTGCCGTGCTCCAGGTGGCC
 E D K E A V F E V S D T M S A V L Q V A
 |331 |341
 |1041 |1051 |1061
 ACTGGCGTCATCTCTACGCTGCAGGcaagacatcacccccctgcttctcctcccctaggt
 T G V I S T L Q
 |351

 cccaggcactggggtgggcatgcggggagggtggccttgggaggaggtgaggtggggctg

 gaggacctggggcagggaaggagaggtgtgctcgctcctgctcctggggaacagggaag

 gacagaaactgctgccatgcagtgggaagtagatgagactcagggggcctggggcctgtca

 aatggcctgaccagaactctttaaaaaaagaaaatctaaacaaaaggccaggtgcagtgg

 ctcatgcctggaatctcacactttg

Exon 15 | Start: 21217 | End: 21298 | Length: 81

```

. . . . .
agaccctgtctcctaaaacagaaaaacaaatcctccaggaacatctgatgcatgctgaaga

. . . . .
taaggactctttgaaaacataaaggccagtaaaacatacaggccagtaagtgttcatagc

. . . . .
acatgtaaatattatcgataattatgagaagatggttcaagttgagagtgagacagagcc

. . . . .
gagtgggtaagagagtatctgccaaggcagggatgtcctggcagaggggcaggtcctgg

. . . . .
gcctggcagcttcagatcccagggtccccagggtcaccactcgccacctgtgccccca

      |1071      |1081      |1091      |1101      |1111      |1121
ATTACCAAGAGAACATGGGACAGGCTCTCAGCCCCGACATGCTGGCCACTGACCTTGCC
I H Q E N M G Q A L S P D M L A T D L A
      |361                      |371

      |1131      |1141      . . . . .
TATTACCTGGTCCGCAAAGGGgtaagtgtgtagcagccagggggagggtgaggagatggg
Y Y L V R K G
      |381

. . . . .
gtgcccccccagagggtgggggagctcaggaatgggtgcaagcggcccagcctgtgtggc

. . . . .
tcaccctgtaatccagcactttgggaagccgaggtgggcgggtcacttgaggccagga

. . . . .
gttcgagaccagcctggtcaacatggtgaaacccgtctcttttgatgtaaaaataaac

. . . . .
aattagctgggtgtggtggcacactcctgtaatcccagttactcgggaggctgaggcagg

. . . . .
agaattgattgaactgggaggt

```

Exon 16 | Start: 21768 | End: 21875 | Length: 107

.
 agcctggtcaacatggtgaaacccgtctcttttgatgtaaaaatacaacaattagctgg

 gtgtggtggcacactcctgtaatcccagttactcgggaggctgaggcaggagaattgatt

 gaactgggaggtggagtttgcggtgaggtgagatcgcgccactgcactccagcctgggca

 acagagcgagactttgtgtcaaaaagaaaaaaaaaaaaaaggaagggggtgcaggcaa

 tggaggcagatcagggcattggagaacctgcctcagcgccatcttcctccctggcaccca
 |1151 |1161 |1171 |1181 |1191 |1201
 ATGCCATTCCGCCAGGCCACGAGGCCTCCGGGAAAGCTGTGTTTCATGGCCGAGACCAAG
 M P F R Q A H E A S G K A V F M A E T K
 |391 |401
 |1211 |1221 |1231 |1241 . .
 GGGGTCGCCCTCAACCAGCTGTCACTGCAGGAGCTGCAGACCATCAGgtacggcccatcc
 G V A L N Q L S L Q E L Q T I S
 |411

 ccttccccatgctgcctcctaggaagtgagcctgggtgcctggagcccagggtggcctgg

 cgccctggcccacctcttcctctctcccagccccctgttctcgggcgacgtgatctgcg

 tgtgggactacgggcacagtgtggagcagtatggtgccctgggcggcactgcgcgtcca

 gcgtcgactggcagatccgccaggtgcgggcgctactgcaggcacagcaggcctaggtcc

 tcccacacctgccccctaataaagtgggcgcgagaggaggctgctgtg

Exon 17 | Start: 21979 | End: 22555 | Length: 576


```

. . . . .
aaaaaaaaaaggaagggggtgcaggcaatggaggcagatcagggcatggagaaacctgc
. . . . .
ctcagcgccatcttcctccctggcacccagatgccattccgccaggcccacgaggcctcc
. . . . .
gggaaagctgtgttcatggccgagaccaagggggtcgccctcaaccagctgtcactgcag
. . . . .
gagctgcagaccatcaggtacggcccatccccttccccatgctgcctcctaggaagtgag
. . . . .
cctgggtgcctggagcccagggtggcctggcgccctggcccacctcttcctctctcccca

|1251      |1261      |1271      |1281      |1291      |1301
CCCCCTGTTCTCGGGCGACGTGATCTGCGTGTGGGACTACGGGCACAGTGTGGAGCAGTA
P L F S G D V I C V W D Y G H S V E Q Y
          |421                      |431

|1311      |1321      |1331      |1341      |1351      |1361
TGGTGCCCTGGGCGGCACTGCGCGCTCCAGCGTCGACTGGCAGATCCGCCAGGTGCGGGC
G A L G G T A R S S V D W Q I R Q V R A
          |441                      |451

|1371      |1381      |1391|+1      |+11      |+21      |+31
GCTACTGAGGCACAGCAGGCCTAGGTCCTCCACACCTGCCCCCTAATAAAGTGGGCGC
L L Q A Q Q A *
          |461

          |+41      |+51      |+61      |+71      |+81      |+91
GAGAGGAGGCTGCTGTGTGTTTCCTGCCCCAGCCTGGCTCCCTCGTTGCTGGGCTTTCGG

          |+101     |+111     |+121     |+131     |+141     |+151
GGCTGGCCAGTGGGGACAGTCAGGGACTGGAGAGGCAGGGCAGGGTGGCCTGTAATCCCA

          |+161     |+171     |+181     |+191     |+201     |+211
GCACTTTGGAAGGGCAAGGTGCGAGGATGCTTGAGGCCAGGAGTTTGACACAGCCTGGGC

          |+221     |+231     |+241     |+251     |+261     |+271
AACACAGGGAGACCCCATCTCTACTCAATAATAAAACAAATAGCCTGGCGTGGTGGCCC

          |+281     |+291     |+301     |+311     |+321     |+331

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ATGCATATAGTCCCAGCTACTTGTAAGGCTGAGGTGAGAGGACACTTGTGCCCAGGAGTG

 |+341 |+351 |+361 |+371 |+381 |+391
GAGGCTGCAGTGAGCTATGATCACGCCACTGCATTCCAGCCTGGATAACAGAGTGAGAAC

 |+401 |+411 |+421 |+431. . . .
CTATCTCTAAAAATAAATAAATAAACGAAAAATAAAtggaagcggagaaaactgggcaag

.
ggcaatgagagtcgtagacgggaagggaagagggggctcccatcatagcctctgctctgt

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tcacacctgtaatcccagcactgtaggaggctgaggc