

Gene: EGFR - Sequence: NG_007726.3
 Transcript: NM_005228.3 - Protein: NP_005219.2
 Date : February 19, 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: 5001 | End: 5334 | Length: 333

```

. . . . .
gggaccgggtccagaggggcagtgtgggaaccccctctcggaattaactcctcaggg

. . . . .
caccgcgtcccctcccatgcgccgccccactcccgcggagactaggtcccgcgggggcc

. . . . .
accgctgtccaccgcctccggcggcgctggccttgggtccccgctgctggttctcctcc

. . . . .
ctcctcctcgattctcctcctcctctgctcctcccgatccctcctccgcgcctggtcc

. . . . .
ctcctcctcccgccctgcctccccgcgcctcgggccgcgcgagctagacgtccgggcagc

      |-239      |-229      |-219      |-209      |-199      |-189
CCCCGGCGCAGCGCGGCCGAGCAGCCTCCGCCCCCGCACGGTGTGAGCGCCGACGCG

      |-179      |-169      |-159      |-149      |-139      |-129
GCCGAGGCGGCGGAGTCCCGAGCTAGCCCCGCGGCGCGCGCCGCCCAGACCGGACGAC

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

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

      |1      |11      |21      |31      |41      |51
GCAGCGATGCGACCCTCCGGGACGGCCGGGCAGCGCTCCTGGCGCTGCTGGCTGCGCTC
  M  R  P  S  G  T  A  G  A  A  L  L  A  L  L  A  A  L
      |1                      |11

```


|301 |311 |321 |331 |341 |351
TTGGA AACCTGCAGATCATCAGAGGAAATATGTACTACGAAAATTCTATGCCTTAGCA
L E N L Q I I R G N M Y Y E N S Y A L A
|101 |111

|421
 CAGGgtgagaggctgggatgccaggctgggggttcataaatgcagacagcagttccgat
 Q E
 |141

Exon 4 | Start: 132575 | End: 132709 | Length: 134

.....
 acatgcataatcatttatgctgtgaccactgactaaaccattctcttccttcctccccata

tttctaaatttctaattcattgctcaaagcccaattcagagaaaaccctagctcctccatg

 gcaccatcattaacaattttatctggccgcccccggaagttcactgggctaattgcgg

 gactcttgttcgcaccatggcatctcttttagcagaacataaatgcaagagcacatgcat

 ccttcatgggaatttaaaggagctggaaagagtgtcaccgcagttccattctccgcag

 |431 |441 |451 |461 |471 |481
 AAATCCTGCATGGCGCCGTGCGGTCAGCAACAACCCTGCCCTGTGCAACGTGGAGAGCA
 I L H G A V R F S N N P A L C N V E S I
 |151 |161

 |491 |501 |511 |521 |531 |541
 TCCAGTGGCGGGACATAGTCAGCAGTGACTTTCTCAGCAACATGTCGATGGACTTCCAGA
 Q W R D I V S S D F L S N M S M D F Q N
 |171 |181

 |551
 ACCACCTGGGCAGCTgtaagtgtcgatacacactatctctgcctccagctcctatgggg
 H L G S C

 gagagctctacagcactggggcaggggagagaagccatgttttagtaagtcacattaatca

 gaaacaaaaagtagtaagcaaaatatctgaccactagaaaagcatgtatttaccacggac

 atagagatcggttttttgtggcgggtggcagccagctggttggcagtgaggccaccgg

 aggagatcccctgcagggacagcagagcacttgtgtcctgagaagagctgctgttcatg

 gggctggcagcacca

Exon 5 | Start: 137263 | End: 137331 | Length: 68

```

. . . . .
agcagattgtaaacaaggaacctcaaattcatgaaaaattcttgcttatgtggcccatgt

. . . . .
cagtaattactctctgcctcagtttccgcagctgacatgtaaataaaagcagttcatggt

. . . . .
tcattcttcttttcttatcggggtctcaagtgattctacaaaccagccagccaacaatca

. . . . .
gagaataagttgaaaagattgtcttcatttattgaatgtgcttaactcaggcccgggaaa

. . . . .
gggcgtcatcagtttctcatcatttcactgagatatgcatctattacttttacatttcag

|561      |571      |581      |591      |601      |611
GCCAAAAGTGTGATCCAAGCTGTCCAATGGGAGCTGCTGGGGTGCAGGAGAGGAGAACT
  Q  K  C  D  P  S  C  P  N  G  S  C  W  G  A  G  E  E  N  C
      |191                      |201

|621
GCCAGAAACgtaagtcagtgacagcctcagacctatgtgtgaccgcccctctcttcctt
  Q  K  L

. . . . .
cacttgcttaggtgattggatttgttttccctctgaagactccaaagagttactttatta

. . . . .
cagggtcagatgtgaaccagtaggtgaaggacagtcttgcaaattctaccgcatgcagtt

. . . . .
aatccagggtgggctattttgggagcttcagcctatcacaataagtgaacatcagcagg

. . . . .
ggctgggcgcggtggctcaccctataatcccagcactttgggaggcggaggcggtcgga

. .
tcacgaggt

```

Exon 6 | Start: 138515 | End: 138633 | Length: 118

.
 cagcaggatatttttgttctttgtatgtgctttctgcattgcccaagatgcatctaattat

 ttagcagggtctcaaagtctagacttgatctcatgagttctcttaagtgattaaaaataaa

 tcaggagaaaaaaggagcaatcagaaaaggcatggtttgacttagtttgaatgtggttt

 cgttgaagcaaatgtgtcttcactttttcatgaaaaagtctgcaagtgtctctgcgacat

 ccctgggaaatgatcctaccctcactcttcagctcacaggaacctttgctctttttcag

 |631 |641 |651 |661 |671 |681
 TGACCAAAATCATCTGTGCCCAGCAGTGCTCCGGGCGCTGCCGTGGCAAGTCCCCCAGTG
 T K I I C A Q Q C S G R C R G K S P S D
 |211 |221

 |691 |701 |711 |721 |731 |741
 ACTGCTGCCACAACCAGTGTGCTGCAGGCTGCACAGGCCCCGGGAGAGCGACTGCCTGg
 C C H N Q C A A G C T G P R E S D C L
 |231 |241

 taagatgccccctccagcagcctccctggagcaggctggggctgcacccgccccaccaca

 ccaggacagaagacttcctgtgggggagctgtcaattagcatttgtcataacagacagga

 tattgcctctgcctggtgacaaagtatcttttagtatcctgcctccaccactcactgaga

 ccttgggaaatgatgggactaccatgcctccatttccttacctgacaatgatgcataac

 aaagtctctcccagttgaatgcttaaatgatgagatgcctgtgatgtccgtcattagga

Exon 7 | Start: 139980 | End: 140121 | Length: 141

.
 caccgctataatgtgtgaactccatcatctatacgttagtaaacagacgtatTTTTATCA

 taatccataaattatgataggtgggacagtgcacctaagaaaaaatggactTTTTAGAG

 aagggtctttctgactctgcagaggcgccagctgggttttccacactagtggaaact

 aggctgcaaagacagtaacttgggctttctgacgggagtcaacaccgtgctgcgcttcct

 ccgtgtgtggcgctgagtggtacttacctcacttgcccagcgtgtcctctctcctccatag

 |751 |761 |771 |781 |791 |801
 GTCTGCCGCAAATTCCGAGACGAAGCCACGTGCAAGGACACCTGCCCCCACTCATGCTC
 V C R K F R D E A T C K D T C P P L M L
 |251 |261

 |811 |821 |831 |841 |851 |861
 TACAACCCACACGTACCAGATGGATGTGAACCCGAGGGCAAATACAGCTTTGGTGCC
 Y N P T T Y Q M D V N P E G K Y S F G A
 |271 |281

 |871 |881
 ACCTGCGTGAAGAAGTGTCCCCGtgagtcctcctctgtgggccctctaactgggtcaggca
 T C V K K C P R
 |291

 tccttgtcccgtctgtctcctgctgagccctggagtatcccatcttggagagtcttgg

 gtggatgtgtttgccttgcttggaggaggcgaccctgtgccgtccaggcacacaggcga

 ggggaggggctggcttgctaccgaggagcgggcaggtggtggccatctccacccatgggg

 gctgctcagtgcacagggcagatctgggtggccaggccacctcacaggagaaacacctgc

 tgctcagccctcaccactcatc

Exon 8 | Start: 141799 | End: 141915 | Length: 116

```
. . . . .
aggtggaggagagggctgaggtgcctgctgggacgcaaacagctggcccctcaaggac

. . . . .
ccagtgtttcctgccatgatgaaacacctgtattgtccacattgcggcctagaatgttat

. . . . .
taaactcttgaacgggattccttctctatttgcaacctttcattctttgtccttaaagta

. . . . .
aataaagccaaaggaggtggagcctttccatcacccctcaagaggacctggaccgcctg

. . . . .
tgtgaggcccgagcacctggtgccaccgtcatcaccttcctttcatgctctcttcccag

|891      |901      |911      |921      |931      |941
GTAATTATGTGGTGACAGATCACGGCTCGTGCGTCCGAGCCTGTGGGGCCGACAGCTATG
  N  Y  V  V  T  D  H  G  S  C  V  R  A  C  G  A  D  S  Y  E
          |301                      |311

|951      |961      |971      |981      |991      |1001
AGATGGAGGAAGACGGCGTCCGCAAGTGTAAGAAGTGCGAAGGGCCTTGCCGCAAAGgta
  M  E  E  D  G  V  R  K  C  K  K  C  E  G  P  C  R  K  V
          |321                      |331

. . . . .
ggaagcccgcggtgtgcggacgaggcttggttctcggctgctgaggctgggctctcatgc

. . . . .
cacctccaaaggaacacatcttctcttctcattaaaaacaactatacatatcgtttct

. . . . .
ttaaacagaagataaagctgtaaagctaggtaggcaatgggaaggcactgaaggttgt

. . . . .
gacggggtgggggctctgatgagaacagtcacagagccagccccgctcagcagctgcca

. . . . .
ggtgcccgccctgggggagaatccagggaaggcagagctggaagcagtcagctcca
```

Exon 9 | Start: 142502 | End: 142628 | Length: 126
BE AWARE: This section overlaps with the following exon

```
. . . . .
gcagtgcagctccaagcggcccatgggaaataatgaggagaacgcaaggtcagtgagg

. . . . .
tgacagggatggcatctcctacaccgccgtagccccaagtgtactataggtcctgggtg

. . . . .
cccccttcccgctgcactctcccagccccttcagtgttgttgagtgaatgaaggat

. . . . .
gatgtggcagtgggcggttccggtgaccggaattccttcctgcttcctctgcctgtggat

. . . . .
ccctagctattcttaatccaacaaatgtgaacggaatacacgtctctcttatctctgcag

|1011      |1021      |1031      |1041      |1051      |1061
TGTGTAACGGAATAGGTATTGGTGAATTTAAAGACTCACTCTCCATAAATGCTACGAATA
  C  N  G  I  G  I  G  E  F  K  D  S  L  S  I  N  A  T  N  I
                |341                                |351

|1071      |1081      |1091      |1101      |1111      |1121
TTAAACACTTCAAAAACTGCACCTCCATCAGTGGCGATCTCCACATCCTGCCGGTGGCAT
  K  H  F  K  N  C  T  S  I  S  G  D  L  H  I  L  P  V  A  F
                |361                                |371

|1131      . . . . .
TTAGGGGgtgagtcacagggttcagttgcttgatataaagaaaaacaaatctgccttttta
  R   G

. . . . .
actggtagagattggtgatcaataatcacctgttgtttgtttcagtgactccttcacac

. . . . .
atactcctcctctggatccacaggaactggatattctgaaaaccgtaaaggaaatcacag

. . . . .
gtttgagctgaattatcacatgaatataaatgggaaatcagtgttttagagagagaactt
```

.
 ttcgacatatttcctgttccttgggaataaaaacatttcttctgaaatttaccgttaat
 . . .
 ggctgat

Exon 10 | Start: 142728 | End: 142801 | Length: 73

.
 ctctgcctgtggatccctagctattcttaatccaacaaatgtgaacggaatacacgtctc

 tcttatctctgcagtggtgaacggaataggtattggtgaatttaaagactcactctccat

 aaatgctacgaatattaaacacttcaaaaactgcacctccatcagtggcgatctccacat

 cctgccggtggcatttagggggtgagtcacaggttcagttgcttgataaagaaaaacaa

 aatctgcctttttaactggtagagattggtgatcaataatcacctgttgttgtttcag
 |1141 |1151 |1161 |1171 |1181 |1191
 TGA CTCCTT CACACATA CTCTCTG GATCCAC AGGAACTG GATATTCTG AAAACCGT
 D S F T H T P P L D P Q E L D I L K T V
 |381 |391
 |1201
 AAAGGAAATCACAGgtttgagctgaattatcacatgaatataaatgggaaatcagtgttt
 K E I T G
 |401

.
 tagagagagaacttttcgacatatttcctgttccttgggaataaaaacatttcttctgaa

 attttaccgttaatggctgatgttttgatatttttcaaaagtcagtttctcctgcaggc

 aaaaggggacacgttaagtccaggcttgggtcattcactgcggtgtaaacacgctttctc

.
cctcccgcccgccccagccagctgccttggtggcccataacccctgagggtagaggag
.
gggacaggggtagg

Exon 11 | Start: 143632 | End: 143722 | Length: 90

.
gagcctcttcggggtaatcagatacgcggcgagcaggggtctcagggccacagccaggg
.
ggggcggggagacatgcggaatcgagcggaaggcgggaggcagctgtgaactgtggct
.
cggcctgcgtccgccctgcgcatgtacactcagagaagatgataatgaaaagaaagcaa
.
atccaattttcccacttactgttcatataatacagagtccttgagagtctagagtaatgt

.
ctcatacaaaaagaaactcctacgtgggtgtgtgtctgaagtctttcatctgccttacag
|1211 |1221 |1231 |1241 |1251 |1261
GGTTTTGCTGATTTCAGGCTTGGCCTGAAAACAGGACCGGACCTCCATGCCTTTGAGAACC
F L L I Q A W P E N R T D L H A F E N L
|411 |421

|1271 |1281 |1291
TAGAAATCATACGCGGCAGGACCAAGCAACAgtaagttgaccacagccaaagcctggtag
E I I R G R T K Q H
|431

.
attacatttgccttttttagttggaaattaggcttaacaggagagttgctaagatagggca
.
cagagctcctgcattctctcgccggcattcccaaagtctatctcacatgagcaggcacagg
.
gagcaagactgcacgaccactggcacaggctgtccgctaaccacagacttctcagcgct

.
 aatgggtcctttatttgtatttagaatattgaagggtattcccatttaaattacttttt

 tcagttccttaagaagcaaattaaaatcttaagattcctaactgtgaaattaccatgtga

 attccattaaaactttttccagatcattaccattcaatgggatgaatttacctgaggtt

 taggctaccaattatttgaatgtaagtaactaaatttagtattagttatattacctttt

 agttgtaggtcactctctgc

Exon 13 | Start: 147468 | End: 147600 | Length: 132

.
 aggactcacggcacccccctctcgggtgccagggtgcctggctcccaccaggaggaagacc

 tgtcctccactgtcaggcacatttcagtcttcccagcagccagcacaaactactttgtcct

 tccagtcacggctcggcctctgggaagcccagtcgtgtcctcctccttcaggggtagcca

 gcatgtctgtgtcacccaagggtcatggagcacagggtcccctcccgggaagggtgccgtctc

 ctccggccccctcgggtccctgctctgtcactgactgctgtgacctctgtctccgcag

|1501	|1511	|1521	|1531	|1541	|1551
AGGCCACAGGCCAGGTCTGCCATGCCTTGTGCTCCCCGAGGGCTGCTGGGGCCCGGAGC					
A	T	G	Q	V	C
H	A	L	C	S	P
E	G	C	W	G	P
E	P				
|501		|511			

|1561	|1571	|1581	|1591	|1601	|1611
CCAGGGACTGCGTCTCTTGCCGGAATGTCAGCCGAGGCAGGGAATGCGTGGACAAGTGCA					
R	D	C	V	S	C
R	N	V	S	R	G
E	C	V	D	K	C
N					
|521		|531			

|1881 |1891 |1901 |1911 . . .
 ATGCACTGGGCCAGGTCTTGAAGGCTGTCCAACGAATGGgtaagtgttcacagctctgtg
 C T G P G L E G C P T N G
 |631

.
 tcacatggacctcgtcaagaatgaccacactgctgtgggtgaagatgctttcctgcattt

 ctgactgtcctctgtcctgatcaagtttctatggctctgggccagcctaccctcagccag

 ggtttctgcagagactgccagctggttccacgtggctccacgtgccaactttgtcctca

 gtggagggaagtggacacacagtgtggggctgtccctgctccgccgttgctcgatg

 catggcctgcctctgaattccttggttccactggttttg

Exon 17 | Start: 158952 | End: 159093 | Length: 141

.
 tcatattttgttaatcaacaaattgaaaaatactcattatatggagaggtccagataaag

 cctcaattttaaaaaatgaggaaaagtgtgcctggtaggggactggggagagcttgagaa

 agttggaaacgttgccttagaagcctgttttttctccttttagaagctacatagtgtctc

 actttccaagatcattctacaagatgtcagtgactgaaacatgcaggggcgtgttgagt

 gccaaaggccatggaatctgtcagcaacctcaccttccttgttcctccacctcattccag

|1921 |1931 |1941 |1951 |1961 |1971
 GCCTAAGATCCCGTCCATCGCCACTGGGATGGTGGGGGCCCTCCTCTTGCTGCTGGTGGT
 P K I P S I A T G M V G A L L L L V V
 |641 |651

|1981	|1991	|2001	|2011	|2021	|2031
GGCCCTGGGGATCGGCCTCTTCATGCGAAGGCGCCACATCGTTCGGAAGCGCACGCTGCG					
A L G I G L F M R R R H I V R K R T L R					
|661					|671

|2041	|2051	|2061.	.	.	.	.	.	.
GAGGCTGCTGCAGGAGAGGGAGgtgagtgccagtcctgggtgggctcaggagccctcgca								
R L L Q E R E								
|681								

.

ccccgacaggaacaagggccagccccgagaacgggccattagcagttgtgtatgttagat

.

acataattgtattatgatgcagaaagaatctctgaatgtgcagttataccagttggtga

.

catgttggtacatccatccgaggaaatggcaatgtttctaggctgcacccttcaatgtcc

.

acaaagctgtgtggcatctgcttaggacccggtgcctgtgtgtgcataggaggaggcca

.

ggaagcctggctgttgatccca

Exon 18 | Start: 159890 | End: 160012 | Length: 122

.

ccctaccggagttttcaatccagttaataggcgtggaaacagacatagaaattgtgtttg

.

ttgaaaggtagctgttcagttaaagaacacctgtatcagagcctgtgtttctaccaactt

.

ctgtcaagctctgttagagaaggcgtacatttgccttccaaatgagctggcaagtgccgt

.

gtcctggcacccaagcccattgccgtggctgctggtccccctgctgggcatgtctggcac

.

tgctttccagcatggtgagggtgaggtgacccttgctctgtgttctgtccccccag

	|2071	|2081	|2091	|2101	|2111	|2121
CTTGTGGAGCCTCTTACACCCAGTGGAGAAGCTCCCAACCAAGCTCTCTTGAGGATCTTG						
L V E P L T P S G E A P N Q A L L R I L						
	|691			|701		

	|2131	|2141	|2151	|2161	|2171	|2181
AAGGAACTGAATTCAAAAAGATCAAAGTGGCTCCGGTTCGGTTCGGCACGGTGTAT						
K E T E F K K I K V L G S G A F G T V Y						
	|711			|721		

AAGtaaggTccctggcacaggcctctgggctgggccgcagggcctctcatggtctggtg
 K

.
 gggagcccagagtcccttgcaagctgtatatattccatcatctactttactctttgtttcac

.
 tgagtgtttgggaaactccagtgtttttcccaagttattgagaggaaatctttataacc

.
 acagtaatcagtggctcctgtgagaccaattcacagaccaaaggcatttttatgaaagggg

.
 ccattgaccttgccatgggggtgcagcacaggcgaggaggaggccgcctctcaccgcacg

.
 gca

Exon 19 | Start: 160691 | End: 160789 | Length: 98

.
 ttaggcctagacgcagcatcattaaattctggatgaaatgatccacacggactttataac

.
 aggctttacaagcttgagattcttttatctaaataatcagtgtgattcgtggagcccaac

.
 agctgcagggtgcggggggtcacagccccagcaatatcagccttaggtgctggctcca

.
 cagccccagtggtccctcaccttcgggggtgcatcgctggtaacatccaccagatcactgg

 gcagcatgtggcaccatctcacaattgccagttaacgtcttccttctctctgtcatag

 |2191 |2201 |2211 |2221 |2231 |2241
 G G A C T C T G G A T C C C A G A A G G T G A G A A A G T T A A A A T T C C C G T C G C T A T C A A G G A A T T A A G A
 G L W I P E G E K V K I P V A I K E L R
 |731 |741

 |2251 |2261 |2271 |2281
 G A A G C A A C A T C T C C G A A A G C C A A C A A G G A A A T C C T C G A T g t g a g t t t c t g c t t t g c t g t g
 E A T S P K A N K E I L D
 |751 |761

 tgggggtccatggctctgaacctcaggccaccttttctcatgtctggcagctgctctgc

 tctagaccctgctcatctccacatcctaaatgttcactttctatgtctttccctttctag

 ctctagtgggtataactccctccccttagagacagcactggcctctcccatgctggtatc

 caccccaaaaggctggaaacaggcaattactggcatctaccagcactagtttcttgaca

 cgcgatgatgagtgagtgtcttgggtgagcctggagcatg

Exon 20 | Start: 167262 | End: 167447 | Length: 185

.
 aggtgactccgactcctcctttatccaatgtgctcctcatggccactgttgccctgggcct

 ctctgtcatggggaatccccagatgcacccaggaggggccctctcccactgcatctgtca

 cttcacagccctgcgtaaacgtccctgtgctaggtcttttgcaggcacagcttttctcc

.
 atgagtacgtatTTTTgaaactcaagatcgcatcatgcgtcttcacctggaaggggtcca

 tgtgcccctccttctggccaccatgcgaagccacactgacgtgcctctccctccctccag

 |2291 |2301 |2311 |2321 |2331 |2341
 GAAGCCTACGTGATGGCCAGCGTGGACAACCCACGTGTGCCGCTGCTGGGCATCTGC
 E A Y V M A S V D N P H V C R L L G I C
 |771 |781

 |2351 |2361 |2371 |2381 |2391 |2401
 CTCACCTCCACCGTGCAGCTCATCAGCAGCTCATGCCCTTCGGCTGCCTCCTGGACTAT
 L T S T V Q L I T Q L M P F G C L L D Y
 |791 |801

 |2411 |2421 |2431 |2441 |2451 |2461
 GTCCGGGAACACAAAGACAATATTGGCTCCCAGTACCTGCTCAACTGGTGTGTGCAGATC
 V R E H K D N I G S Q Y L L N W C V Q I
 |811 |821

 GCAAAGgtaatcaggggaaggagatacggggaggggagataaggagccaggatcctcaca
 A K

 tgcggtctgcgctcctgggatatgcaagagtttgccatggggatatgtgtgtgcgtgcatg

 cagcacacacacattcctttatTTTggattcaatcaagttgatcttcttgtgcacaaatc

 agtgcctgtcccatctgcatgtggaaactctcatcaatcagctacctttgaagaattttc

 tctttattgagtgtcagtggtctgatgtctctgttcttatttctctggaattctttg

 . .
 tgaata

Exon 21 | Start: 177688 | End: 177843 | Length: 155

.
 aagttcaagcccaggtctcaactgggcagcagagctcctgctcttctttgtcctcatata

 cgagcacctctggacttaaaacttgaggaactggatggagaaaagttaatggtcagcagc

 gggttacatcttctttcatgcgctttccattctttggatcagtagtcactaacgttcgc

 cagccataagtcctcgacgtggagaggctcagagcctggcatgaacatgaccctgaattc

 ggatgcagagcttcttcccatgatgatctgtccctcacagcagggtcttctctgtttcag

 |2471 |2481 |2491 |2501 |2511 |2521
 GGCATGAACTACTTGGAGGACCGTCGCTTGGTGCACCGCGACCTGGCAGCCAGGAACGTA
 G M N Y L E D R R L V H R D L A A R N V
 |831 |841

 |2531 |2541 |2551 |2561 |2571 |2581
 CTGGTGAAAACACCGCAGCATGTCAAGATCACAGATTTTGGGCTGGCCAAACTGCTGGGT
 L V K T P Q H V K I T D F G L A K L L G
 |851 |861

 |2591 |2601 |2611 |2621
 GCGGAAGAGAAAGAATACCATGCAGAAGGAGGCAAAgtaaggaggtggctttaggtcagc
 A E E K E Y H A E G G K
 |871

 cagcattttctgacaccagggaccaggctgccttcccactagctgtattgtttaacaca

 tgcaggggaggatgctctccagacattctgggtgagctcgagcagctgctgctggcagc

 tgggtccagccagggtctcctggtagtgtgagccagagctgctttgggaacagtacttgc

 tgggacagtgaatgaggatgttatccccaggatgattagcaaatgttaggtttcagtc

 tctccctgcaggatatataagtccccttcaatagcg

Exon 22 | Start: 178735 | End: 178810 | Length: 75

```
. . . . .
tgggccctgaaaacacacgcagacctggatgagtgaggccactgggcacaccagggctc
. . . . .
ccagctcaccagagcagcctgggacacagagggtgctcagaaacctaccagagcagccct
. . . . .
gaactccgtcagactgaaatcccctgttgccgggaggaggcgccgggcctgggggacggg
. . . . .
tcctggggtgatctggctcgtctgtgtgtgtcactcgtaattaggtccagagtgagttaa
. . . . .
ctttttccaacagaggaaactaatagttgtctcactgcctcatctctcaccatcccaag
      |2631      |2641      |2651      |2661      |2671      |2681
GTGCCTATCAAGTGGATGGCATTGGAATCAATTTACACAGAATCTATACCCACCAGAGT
V P I K W M A L E S I L H R I Y T H Q S
      |881                      |891

      |2691      |2701.      . . . . .
GATGTCTGGAGCTACGgtgagtcataatcctgatgctaatagtttgtactgaggccaag
D V W S Y G
      |901

. . . . .
ctggcttttattgttagttaatttacattatatcctctgacatgcaagtattttctttcg
. . . . .
agataatgactaatgataatgtaatcattgctgtctatctattgtactgagaaaacacgg
. . . . .
cagaggaaatcgagtcagctgccgtccaaaagtcactggagattgcaatgagctcgtct
. . . . .
ggcagggtggggggtatgggagggaagagcttaggaaacggctctccctgcaaagtcca
. . . . .
accaaactttaacgtt
```


Exon 23 | Start: 184686 | End: 184832 | Length: 146

```
. . . . .
gttaattaccaaagtttaccacttatcagtcacttactacttgctgggcattgcactaag
. . . . .
catttcagttgtattatcttgttgggtccttacagcaatcctgtgaaacagatactgcta
. . . . .
ttaccccactttatagagaggtagactgaggcttccagcattgaagcaaattgcccaaga
. . . . .
ctacagaaatgtaggtttctaacaatcaagaaacagtaaccagtaatgatgactaaagca
. . . . .
agggattgtgattgttcattcatgatcccactgccttcttttcttgcttcacctctcag
      |2711      |2721      |2731      |2741      |2751      |2761
GGGTGACCGTTTGGGAGTTGATGACCTTTGGATCCAAGCCATATGACGGAATCCCTGCCA
  V  T  V  W  E  L  M  T  F  G  S  K  P  Y  D  G  I  P  A  S
                        |911                                |921

      |2771      |2781      |2791      |2801      |2811      |2821
GCGAGATCTCCTCCATCCTGGAGAAAGGAGAACGCCTCCCTCAGCCACCCATATGTACCA
  E  I  S  S  I  L  E  K  G  E  R  L  P  Q  P  P  I  C  T  I
                        |931                                |941

      |2831      |2841      . . . . .
TCGATGTCTACATGATCATGGTCAAGTgtgagtgactgggtgggtctgtccacactgccta
  D  V  Y  M  I  M  V  K  C

. . . . .
gctgagccttggtggctgctcttagccaaacagctgaggcctttgcatccctggagaaat
. . . . .
gtcatcacattacttaaggcaggcacacaaatccagaaacatctgtaaataccccttcaa
. . . . .
gcattcttttaaagacacttcttgactcattgggcagtatgacctgacatttgcccatgt
. . . . .
```

ttgcaagcaaataaataaaaactaaagtcttccgcaagccattacaccaaataattctatt

.
cgctgagttactcaatgaaataccgag

Exon 24 | Start: 186285 | End: 186382 | Length: 97

.
cagaccacactgctccatcccctcaggcgtaacacaggatgctgacccaggaagagtg

.
ggcgtagaaaaactagagggcattattgttattctgattcaaattgtacagtgtggtgcatg

.
gtctttaaacagtaaccagtactagctggccaagacagaaaagtctaccacaaagacttg

.
gttctttcatcacttatttgactggaagtgtcgcatcaccaatgccttctttaagcaatg

.
ccatctttatcatttcttccagtgttctaattgcactgttttttctcattccttccccag

|2851	|2861	|2871	|2881	|2891	|2901
GCTGGATGATAGACGCAGATAGTCGCCCCAAAGTTCCGTGAGTTGATCATCGAATTCTCCA					
W	M	I	D	A	D
S	R	P	K	F	R
E	L	I	I	E	F
S	K				
|951			|961		

|2911	|2921	|2931	|2941	.	.	.	.
AAATGGCCCGAGACCCCGAGCGCTACCTTGTCATTGAG				gtacaaattgcagtctgtgctt			
M	A	R	D	P	Q	R	Y
L	V	I	Q				
|971			|981				

.
ccattgggaagagtcctctaatagagcatctcatgtcactgtgttctgtcacatgccagc

.
ctggcctccctgtgtcccagatcgattattaaaccctccagcgcattagagcaagcctc

.
agtaaggcgcaggccacatcgtgaactaagcagcatccgtgagtggggcccaccaactc

.

catctccccctccccgtctgaactctcctctggtgctcgtcctcactgtccggctagcca
.
aagcctcagctgggtctaagagagaagcatggtctatt

Exon 25 | Start: 187157 | End: 187324 | Length: 167

.
cacagcaaggtgcacactcgatgaatgctgcagcttcttccctttctgtttcctcagaag
.
ctatttgaatctcatgtaggggctttcaagcatcaaaggatggttcatgttttattttaa
.
ggcaccacatcatgtcatgaggggaggcagctataatttagagaaccaagggggatttc
.
attataacaaaattggcaaacacacaggcacctgctggcaatagaccctgctcctatag
.
ccaagaagtggaatagcatctctacgggccattctaatagcctcaaaatctctgcaccag

|2951 |2961 |2971 |2981 |2991 |3001
GGGGATGAAAGAATGCATTTGCCAAGTCCTACAGACTCCAACCTTCTACCGTGCCCTGATG
G D E R M H L P S P T D S N F Y R A L M
|991 |1001

|3011 |3021 |3031 |3041 |3051 |3061
GATGAAGAAGACATGGACGACGTGGTGGATGCCGACGAGTACCTCATCCACAGCAGGGC
D E E D M D D V V D A D E Y L I P Q Q G
|1011 |1021

|3071 |3081 |3091 |3101 |3111 .
TTCTTCAGCAGCCCCCTCCACGTCACGGACTCCCTCCTGAGCTCTCTGgtatgaaatctc
F F S S P S T S R T P L L S S L
|1031

.
tgtctctctctctctcaagctgtgtctactcatttgaacaaattgaatttttagggaaa
.
ataaccatctagtgaaactcacatggatatgaagtcaattttaaccaaatggtaaaatca

.
aatcaaaataaattaagtgtattaattatTTTTgttgcatgcaacaacttgattgtaag
.
ccttttaggtccactatggaatgtaattaaatcaaaactaaacctagttgctctaaaact
.
aagattaagacaaaaattaaacaccttcacaatataccctccatgag

Exon 26 | Start: 187704 | End: 187751 | Length: 47

.
tctagtgaactcacatggatatgaagtcaattttaaccaaaggtaaaatcaaatcaa
.
aataaattaagtgtattaattatTTTTgttgcatgcaacaacttgattgtaagcctttta
.
gggccactatggaatgtaattaaatcaaaactaaacctagttgctctaaaactaacgatt
.
aagacaaaaattaaacaccttcacaatataccctccatgaggcacaccacctgcattcag
.
gaaaagtggtatgagatgtggtacaagcattccatgggcaacttctctgtttcttttcag

	|3121	|3131	|3141	|3151	|3161	.	.
	AGTGCAACCAGCAACAATTCACCGTGGCTTGCAATTGATAGAAATGGGgtatgtatgaac						
	S	A	T	S	N	N	S
			T	V	A	C	I
					D	R	N
					G		
	|1041			|1051			

.
accttataagccagaatttacagctctccactatggctctatTTTtacatggaaaatgcct
.
taacctaaataattttaaccagataatcttgagttttcttctgtgtgggtttttccct
.
gcacggctgtcacgcctcacagtgccgttcaaagcgtgactcctggaccagtagtagcat
.

tgtgtctggttggttgctgtacctctgttgtaagaatgaatctgcaaaatttctagctta

.
tgaagcaaatcacggacatacacatctgtgtgtgtgagtgttcatgatg

Exon 28 | Start: 191225 | End: 193307 | Length: 2082

.
acacatcacacatatatgtatacatgcatacacatacacacacacatacacacactctcc

.
tcaaggcagtttatcctctgagaactttaatttataaaagacacatatgtccattactt

.
tgagaaggacaggaaagaaccactttcttttgagcaacagcaagagggccctcccgag

.
gctcctgctccctgtcataagtctccttggtgaggacattcacagggttcagaaccagg

.
gatcctgcatgggatgggtgctttgctgattacttcacctctgatttctttccactttcag

|3281	|3291	|3301	|3311	|3321	|3331
AATACATAAACCAGTCCGTTCCCAAAAGGCCCGCTGGCTCTGTGCAGAATCCTGTCTATC					
Y	I	N	Q	S	V
		P	K	R	P
			A	G	S
			V	Q	N
			P	V	Y
			H		
			|1101		|1111

|3341	|3351	|3361	|3371	|3381	|3391
ACAATCAGCCTCTGAACCCCGCGCCAGCAGAGACCCACACTACCAGGACCCCAACAGCA					
N	Q	P	L	N	P
		A	P	S	R
			D	P	H
			Y	Q	D
			P	H	S
			T		
			|1121		|1131

|3401	|3411	|3421	|3431	|3441	|3451
CTGCAGTGGGCAACCCGAGTATCTCAACACTGTCCAGCCACCTGTGTCAACAGCACAT					
A	V	G	N	P	E
		Y	L	N	T
		V	Q	P	T
			C	V	N
			S	T	F
			|1141		|1151

|3461	|3471	|3481	|3491	|3501	|3511
TCGACAGCCCTGCCCCTGGGCCAGAAAGGCAGCCACCAAATTAGCCTGGACAACCCTG					
D	S	P	A	H	W
		A	Q	K	G
			S	H	Q
			I	S	L
			D	N	P
			|1161		|1171

TTTGTAAAAATGTCCCCACGGTACTTACTCCCCACTGATGGACCAGTGGTTTCCAGTCAT
 | +721 | +731 | +741 | +751 | +761 | +771
 GAGCGTTAGACTGACTTGTTTGTCTTCCATTCCATTGTTTTGAAACTCAGTATGCTGCCC
 | +781 | +791 | +801 | +811 | +821 | +831
 CTGTCTTGCTGTCATGAAATCAGCAAGAGAGGATGACACATCAAATAATAACTCGGATTC
 | +841 | +851 | +861 | +871 | +881 | +891
 CAGCCCACATTGGATTCATCAGCATTTGGACCAATAGCCCACAGCTGAGAATGTGGAATA
 | +901 | +911 | +921 | +931 | +941 | +951
 CCTAAGGATAGCACCCTTTTGTCTCGCAAAAACGTATCTCCTAATTTGAGGCTCAGAT
 | +961 | +971 | +981 | +991 | +1001 | +1011
 GAAATGCATCAGGTCCTTTGGGGCATAGATCAGAAGACTACAAAAATGAAGCTGCTCTGA
 | +1021 | +1031 | +1041 | +1051 | +1061 | +1071
 AATCTCCTTTAGCCATCACCCCAACCCCCAAAATTAGTTTGTGTTACTTATGGAAGATA
 | +1081 | +1091 | +1101 | +1111 | +1121 | +1131
 GTTTTCTCCTTTTACTTCACTTCAAAAGCTTTTACTCAAAGAGTATATGTTCCCTCCAG
 | +1141 | +1151 | +1161 | +1171 | +1181 | +1191
 GTCAGCTGCCCCCAAACCCCTCCTTACGCTTTGTACACAAAAAGTGTCTCTGCCTTGA
 | +1201 | +1211 | +1221 | +1231 | +1241 | +1251
 GTCATCTATTCAAGCACTTACAGCTCTGGCCACAACAGGGCATTTTACAGGTGCGAATGA
 | +1261 | +1271 | +1281 | +1291 | +1301 | +1311
 CAGTAGCATTATGAGTAGTGTGGAATTCAGGTAGTAAATATGAACTAGGGTTTGAAATT
 | +1321 | +1331 | +1341 | +1351 | +1361 | +1371
 GATAATGCTTTCACAACATTTGCAGATGTTTTAGAAGGAAAAAAGTTCCTTCCTAAAATA
 | +1381 | +1391 | +1401 | +1411 | +1421 | +1431
 ATTTCTCTACAATTGGAAGATTGGAAGATTCAGCTAGTTAGGAGCCCACCTTTTTTCCTA
 | +1441 | +1451 | +1461 | +1471 | +1481 | +1491
 ATCTGTGTGTGCCCTGTAACTGACTGGTTAACAGCAGTCCTTTGTAAACAGTGTTTTAA
 | +1501 | +1511 | +1521 | +1531 | +1541 | +1551
 ACTCTCCTAGTCAATATCCACCCCATCCAATTTATCAAGGAAGAAATGGTTCAGAAAATA
 | +1561 | +1571 | +1581 | +1591 | +1601 | +1611
 TTTTCAGCCTACAGTTATGTTTCAGTCACACACATACAAAATGTTTCCTTTTGCTTTTAA

|+1621	|+1631	|+1641	|+1651	|+1661	|+1671	
AGTAATTTTGGACTCCCAGATCAGTCAGAGCCCCTACAGCATTGTTAAGAAAAGTATTGA						
|+1681	|+1691	|+1701	|+1711	|+1721	.	.
TTTTTGTCTCAATGAAAATAAACTATATTTCATTCCACTCTAttatgctctcaaatacc						
.
cctaagcatctatactagcctgggtatgggtatgaaagatacaaagataaataaaacatag						
.
tccctgattctaagaaattcacatatttagcaaaggaaatggactcatagatgctaactt						
.
aaaacaacgtgacaaatgccagacaggacccatcagccaggcactgtgagagcacagagc						
.
agggaggttgggtcctgcctgaggagacctggaaggaggcctcacaggaggatgaccag						
.
gtctcagtcagcggggaggtggaaagtgcaggtgcatcagggg						

LRG Parser: Version: 0.3, Version Date: 11/02/2015
 Reader: Version: 0.3, Version Date: 11/02/2015
 Writer: Version: 0.3, Version Date: 11/02/2015
 Control: Version: 0.3, Version Date: 11/02/2015