

Date : February 12, 2015

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

Exon 1 | Start: 5001 | End: 5334 | Length: 333

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

|211 |221 |231
 TGCAGAGGAATTATGATCTTTCTTCTTAAAGgttggtgactttgattttcctacacaaa
 Q R N Y D L S F L K
 |71

taaaattggagaaaatctaagtggagaaaggcctgggcagaattccacttgaagtgtgtt
tatttttgctatggcaatgacaagtcttacagagctacaacgagagttttatgagaaag
ccattttaccagctaatagtcaagtaataactagaaaaggatatcaaatagaaacaggcta
atctggagttccatgtcatcatagacactgacgtttatccctgaccattacctcagtcatt
gatgtgctgccatactcgctcttataaaacttt

aatttcattttcactggagagtgttgaaccccgtaggcatgagagcacagtgttcag
aacaatgcttactgctcattatcacaggggtcaaaggctaacgtgcagggattgttcag
atcgtggacatgctgcctcctgtgtccatgactgcaatcgtctacctattttacagtgt
tgagcactcgtgtgcattagggttcaactgggcgtcctagggtccctggaccatttta
gaccttgagttcttgagttcctcaaagagaaatcacgcatttatgttttctcttcttag

tttctaaatttctaattcattgctcaaagcccaattcagagaaaaccctagctcctccatg

 gcaccatcattaacaattttatctggccgcccccggaagttcactgggctaattgcgg

 gactcttgttcgcaccatggcatctcttttagcagaacataaatgcgaagagcacatgcat

 ccttcatgggaatttaaaggagctggaaagagtgtcaccgcagttccattctccgcag

 |431 |441 |451 |461 |471 |481
 AAATCCTGCATGGCGCGGTTCAGCAACAACCCTGCCCTGTGCAACGTGGAGAGCA
 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
 ACCACCTGGGCAGCTgtaagtgtcgcatacacactatctctgcctccagctcctatgggg
 H L G S C

 gagagctctacagcactggggcaggggagagaagccatgttttagtaagtcacattaatca

 gaaacaaaaagtagtaagcaaaatatctgaccactagaaaagcatgtatttaccacggac

 atagagatcggttttttgtggcgggtggcagccagctggttggcagtgaggccaccgg

 aggcatatcccctgcagggacagcagagcacttgtgtcctgagaagagctgctgttcatg

 gggctggcagcacca

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

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. . . . .
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
GCCAGAAACgtaagtcagtgaaacagcctcagacctatgtgtgaccgcccctctcttcctt
  Q  K  L

. . . . .
cacttgcttaggtgattggatttgttttccctctgaagactccaaagagttactttatta

. . . . .
cagggtcagatgtgaaccagtaggtgaaggacagtcttgcaaattctaccgcatgcagtt

. . . . .
aatccagggtgggctattttgggagcttcagcctatcacaataagtgaacatcagcagg

. . . . .
ggctgggcgcgggtggctcaccctataatcccagcactttgggaggcggaggcggtcgga

. .
tcacgaggt

```

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

.
 cagcaggatatttttgttctttgtatgtgctttctgcattgcccaagatgcatctaattat

 ttagcagggtctcaaagtctagacttgatctcatgagttctcttaagtgattaaaaataaa

 tcaggagaaaaaaggagcaatcagaaaaggcatggtttgacttagtttgaatgtggttt

 cgttgaagcaaatgtgtcttcactttttcatgaaaaagtctgcaagtgtctctgcgacat

 ccctgggaaatgatcctaccctcactcttcagctcacagggaacctttgctctttttcag

 |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

 ccttgggaaaatgatgggactaccatgcctccatttccttacctgacaatgatgcataac

 aaagtctctcccagttgaatgcttaaatgatgagatgcctgtgatgtccgtcattagga

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

.
 caccgctataatgtgtgaactccatcatctatacgttagtaaacagacgtatTTTTATCA

 taatccataaattatgatagggtgggacagtgcacctaagaaaaaatggactTTTTAGAG

 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
BE AWARE: This section overlaps with the following exon

```
. . . . .
aggtggaggagaggctgaggtgcctgctgggacgcaaacagctggcccctcaaggac

. . . . .
ccagtgtttcctgccatgatgaaacacctgtattgtccacattgcggcctagaatgttat

. . . . .
taaactctgaacgggattccttctctatttgcaacctttcattctttgtccttaaagta

. . . . .
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

. . . . .
ggaagcccgcggtgtgcgacgaggcttggttctcggctgctgaggctgggctctcatgc

. . . . .
cacctccaaaggaacacatcttctcttctcattaaaaacaactatacatatcgtttct

. . . . .
ttaaacagaagataaagctgtaaagctaggttaggcaatgggaaggcactgaaggttgt

. . . . .
gacggggtgggggctctgatgagaacagtcacagagccagccccgctcagcagctgcca

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

```

. . . . .
gcagtgcagctccaagcggcccatgggaaataatgaggagaacgcaaggtcagtgagg

. . . . .
tgacagggatggcatctcctacaccgccgtagccccaagtgtactataggtcctgggtg

. . . . .
cccccttcccgctgcactctcccagccccttcagtgtttggtgagtgaatgaaggat

. . . . .
gatgtggcagtgggcggttccggtgaccggaattccttcctgcttcctctgcctgtggat

. . . . .
ccctagctattcttaatccaacaaatgtgaacggaatacacgtctctcttatctctgcag

    |1011    |1021    |1031    |1041    |1051    |1061
TGTTAACGGAATAGGTATTGGTGAATTTAAAGACTCACTCTCCATAAATGCTACGAATA
  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    . . . . .
TTAGGGGgtgagtcacagggttcagttgcttgataaagaaaaacaaatctgccttttta
  R   G

. . . . .
actggtagagattggtgatcaataatcacctgttgtttgtttcagtgactccttcacac

. . . . .
atactcctcctctggatccacaggaactggatattctgaaaaccgtaaaggaaatcacag

. . . . .
gtttgagctgaattatcacatgaatataaatgggaaatcagtgttttagagagagaactt

```

.
ttcgacatatttcctgttccttgggaataaaaacatttcttctgaaatttaccgttaat
. . .
ggctgat

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

.
ctctgcctgtggatccctagctattcttaatccaacaaatgtgaacggaatacacgtctc
.
tcttatctctgcagtggtgaacggaataggtattggtgaatttaaagactcactctccat
.
aaatgctacgaatattaaacacttcaaaaactgcacctccatcagtggcgatctccacat
.
cctgccggtggcatttagggggtgagtcacaggttcagttgcttgataaagaaaaaca
.
aatctgcctttttaactggtagagattggtgatcaataatcacctgttgttgtttcag
|1141 |1151 |1161 |1171 |1181 |1191
TGACTCCTTCACACATACTCCTCCTCTGGATCCACAGGAACTGGATATTCTGAAAACCGT
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
.
attttaccgttaatggctgatgttttgatatttttcaaagtgcagtttctcctgcaggc
.
aaaaggggacacgttaagtccaggcttgggtcattcactgcggtgtaaacacgctttctc

.
cctcccgcccgccccagccagctgccttggtggcccataacccctgagggtagaggag
. . .
gggacaggggtagg

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

.
gagcctcttcggggtaatcagatacgcggcgagcaggggtctcagggccacagccaggg
.
gggcggcgggagacatgcggaatcgagcggaaggcgggaggcagctgtgaactgtggct
.
cggcctgcgtccgccctgcgcatgtacactcagagaagatgataatgaaaagaaagcaa
.
atccaattttcccacttactgttcatataatacagagtccttgagagtctagagtaatgt
.
ctcatacaaaaaagaactcctacgtggtgtgtgtctgaagtctttcatctgccttacag
|1211 |1221 |1231 |1241 |1251 |1261
GGTTTTGCTGATT CAGGCTTGGCCTGAAAACAGGACGGACCTCCATGCCTTTGAGAACCC
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

.
cgccagtgccttctgcttctgtgtccactccagatcccacattgcacttagttgtcaaac
.
ttttcagtcatttctaacctatattagctc

Exon 12 | Start: 146108 | End: 146307 | Length: 199

.
ctcaatttccaggcaaaatgaaaatggagaaaatataatgacattaaggcattttattca
.
tcctccccatctgccactgggttaaagataactaaataaacaaggaactatcttttgctg
.
gaggaactttaaaacacctgcagttttcaaagggtgcagtggtgcctcccacagcatg
.
acctaccatcattggaaagcagttttagtcaatcaaagggtggtctggagaaacaaagtt
.
ttcagggatacattgtttttataatttttcaccacatgatttttcttctctccaatgtag

1301	1311	1321	1331	1341	1351
TGGTCAGTTTCTCTTGCAGTCGT	CAGCCTGAACATAACATCCTTGGGATTACGCTCCCT				
G	Q	F	S	L	A
		V	V	S	L
			N	I	T
			S	L	G
				L	R
					S
					L
		441			451

1361	1371	1381	1391	1401	1411
CAAGGAGATAAGTGATGGAGATGTGATAATTT	CAGGAAACAAAAATTTGTGCTATGCAAA				
K	E	I	S	D	G
		D	V	I	I
			S	G	N
			K	N	L
				C	Y
					A
					N
		461			471

1421	1431	1441	1451	1461	1471
TACAATAAACTGGAAAAAACTGTTTGGGACCTCCGGTCAGAAAAACAAAATTATAAGCAA					
T	I	N	W	K	K
		L	F	G	T
			S	G	Q
				K	T
				K	I
					I
					S
					N
		481			491

1481	1491
CAGAGGTGAAAAACAGCTGCAgtaagtcaccgctttctgtttagtttatggagttggttct		
R	G	E
	N	S
	C	K

.
 aatgggtcctttatttgtatttagaatattgaagggtattcccatttaaattacttttt

 tcagttccttaagaagcaaattaaaatcttaagattcctaactgtgaaattaccatgtga

 attccattaaaactttttccagatcattaccattcaatgggatgaatttacctgaggtt

 taggctaccaattatttgaatgtaagtaactaaatttagtattagttatattacctttt

 agttgtaggtcactctctgc

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

.
 aggactcacggcacccccctctcgggtgccagggtgcctggctcccaccaggaggaagacc

 tgtcctccactgtcaggcacatttcagtcttcccagcagccagcacaaactactttgtcct

 tccagtcacggtcggcctctgggaagcccagtcctgtgtcctcctccttcaggggtagcca

 gcatgtctgtgtcacccaaggtcatggagcacagggcccctcccgggaaggtgccgtctc

 ctccggcccctcgggtccctgctctgtcactgactgctgtgacctctgtctccgcag

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
R	E	C	V	D	K
C	N				

|521 |531

|1621 |1631.

ACCTTCTGGAGGGtaggaggttatttctttaatccccttgcggtgatcaaaaataaggc
 L L E G

|541

.

tccaggttggtgttatagctttacaggcattctgtttgattttctcttccttttattctt

.

tgcccttggccttttgagggttttgggttttctgtggggagacgggaagtggttgattgc

.

gttatttttggcaaatttaagcacaaataggaaataagcaagtattattgcctaataataat

.

ccaataatttatagaatctcttttctggaagtatcttaaattttctaagctacaaaaa

.

gttcctaagacaa

Exon 14 | Start: 149702 | End: 149792 | Length: 90

.

aacacctcctcaggactatcttttcttttatcatttggcttgcttacccaatatgcaaaa

.

actatgctgtagaaaaagcagaaaagatatcttgattatgaatgaagctcctgtgtttac

.

tcagagagaagatgaccaggattcagttaacaaaatcagctgattatattactatatag

.

tcctggagtgcccaactccttgaccattacctaagttatttgggaattttgaagaggtgat

.

ttgtgttcctgcaataatgtctcaggggtgggctgacgggtttcctcttcctcctcctcag

|1641 |1651 |1661 |1671 |1681 |1691

TGAGCCAAGGGAGTTTGTGGAGAACTCTGAGTGCATACAGTGCCACCCAGAGTGCCTGCC
 E P R E F V E N S E C I Q C H P E C L P

|551 |561
 |1701 |1711 |1721
 TCAGGCCATGAACATCACCTGCACAGGACGGgtaagagccccttgctgctatccacgtcc
 Q A M N I T C T G R
 |571

.
 atttcatgggaaggccttcacagaagccgaacagtgatgatggcccagggcacccctgtg

 tgggcaggacggccatcagagccacttcccagaggagacggcaggcgctgacagcgctgt

 ccgggcagggtgtcggtgacattagcacacacattagcctgcgatgaacattcactcttt

 ctgctgacacccccaaccttatctaagcttatcaaatcctcacatttaacggaggctgtt

 ttcacctgggtttcccccatccctgacctagt

Exon 15 | Start: 151249 | End: 151406 | Length: 157

.
 gttttgccaaaggaaagatgccacaatgggttaagcagaatgcaataatgtagagaatatc

 atttctttcatgctgggtgtatatcatatgcattcaaaaacaggggagaacttctaagcaac

 taacagtgaccatatcaagcaggtgcaatcacagaataactgggttttctcctttaagaat

 ttttctatcatttgggtttccccactcacacacactaaatattttaagtaaaaagttact

 tccattttgaaagagaaaagaaagagacatgcatgaacatttttctccaccttgggtgcag

|1731 |1741 |1751 |1761 |1771 |1781
 GGACCAGACAACACTGTATCCAGTGTGCCCACTACATTGACGGCCCCCACTGCGTCAAGACC
 G P D N C I Q C A H Y I D G P H C V K T

|581 |591
 |1791 |1801 |1811 |1821 |1831 |1841
 TCCCCGGCAGGAGTCATGGGAGAAAACAACACCCTGGTCTGGAAGTACGCAGACGCCGGC
 C P A G V M G E N N T L V W K Y A D A G
 |601 |611
 |1851 |1861 |1871
 CATGTGTGCCACCTGTGCCATCCAACTGCACCTACGGgtgagtggaaagtgaaggagaa
 H V C H L C H P N C T Y G
 |621

 cagaacatttcctctcttgcaaattcagagatcaaaatgtctcccaagttttccggcaa

 caaattgccgaggtttgtatttgagtcagttacttaagggttttggtccccacagccat

 gccagtagcaacttgcttgtagcaggcctcagtgagtggaatgactctgcatgcac

 cgtgtccccggccgggcctgtgttgcaatgctgcacatcacaacaggagggttaggggg

 acaaaagagcacaggtcctggcagctgccacagtctcc

Exon 16 | Start: 157144 | End: 157182 | Length: 38

.
 aattatctgtgtcaaaagccagatgtgaaaacatctcaataacaaactggctgctttgtt

 caatgctagaacaacgcctgtcacagagtagaaactcaaaaatatttgctgagtgaatga

 acaaatgaataaatgcataataaataattaaccaccaatccaacatccagacacatagtg

 attttaattatttaagagtagtttagcatatattgctttatgatttaattaaaaatctcc

aaaatatatgccaaagaagtagaatgagaaaaatgtatatatttctctttcacttcctacag

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

.
tcacatggacctcgtcaagaatgaccacactgctgtgggtgaagatgctttcctgcattt

.
ctgactgtcctctgtcctgatcaagtttctatggctctgggccagcctaccctcagccag

.
ggtttctgcagagactgccagctggttccacgtggctccacgtgccaactttgtcctca

.
gtggagggaagtggacacacagtgtctggggctgtccctgtccgccgttgctcgatg

.
catggcctgcctctgaattccttggttccactggttttg

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

.
tcatattttgttaatcaacaaattgaaaaatactcattatatggagaggtccagataaag

.
cctcaattttaaaaaatgaggaaaagtgtgcctggtaggggactggggagagcttgagaa

.
agttggaaacgttgcttagaagcctgttttttctccttttagaagctacatagtgtctc

.
actttccaagatcattctacaagatgtcagtgactgaaacatgcaggggcgtgttgagt

.
gccaaaggccatggaatctgtcagcaacctcaccttccttggtcctccacctcattccag

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

|641 |651
 |1981 |1991 |2001 |2011 |2021 |2031
 GGCCTGGGGATCGGCCTCTTCATGCGAAGGCGCCACATCGTTCGGAAGCGCACGCTGCG
 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

 cccgcacaggaacaagggccagccccgagaacgggccattagcagttgtgtatgttagat

 acataattgtattatgatgcagaaagaatctctgaatgtgcagttataccagttggtga

 catgttggtacatccatccgaggaaatggcaatgtttctaggctgcacccttcaatgtcc

 acaaagctgtgtggcatctgcttaggacccggtgcctgtgtgtgcataggagggaggcca

 ggaagcctggctgttgatccca

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

.
 ccctaccggagttttcaatccagttaataggcgtggaaacagacatagaaattgtgtttg

 ttgaaaggtagctgttcagttaaagaacacctgtatcagagcctgtgtttctaccaactt

 ctgtcaagctctgttagagaaggcgtacatttgtccttccaaatgagctggcaagtgccgt

 gtcctggcacccaagcccattgccgtggctgctggtccccctgctgggcatgtctggcac

tgctttccagcatggtgagggctgaggtgacccttgtctctgtgttcttggtccccccag

	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
AAGGAACTGAATTCAAAAAGATCAAAGTGCTGGGCTCCGGTTCGGTTCGGCACGGTGTAT						
K E T E F K K I K V L G S G A F G T V Y						
	711			721		

AAGgtaaggccctggcacaggcctctgggctgggccgcagggcctctcatggtctggtg
K

.
gggagcccagagtccttgcaagctgtatatttccatcatctactttactctttgtttcac

.
tgagtgtttgggaaactccagtgtttttcccaagttattgagaggaaatcttttataacc

.
acagtaatcagtggtcctgtgagaccaattcacagaccaaaggcatttttatgaaagggg

.
ccattgaccttgccatgggggtgcagcacaggcgaggaggaggccgcctctcaccgcacg

.
gca

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

.
ttaggcctagacgcagcatcattaaattctggatgaaatgatccacacggactttataac

.
aggctttacaagcttgagattcttttatctaaataatcagtggtgattcgtggagcccaac

.
agctgcagggtgcggggggtcacagccccagcaatatcagccttaggtgctggctcca

.
 cagccccagtggtccctcaccttcgggggtgcatcgctggtaacatccaccagatcactgg

 gcagcatgtggcaccatctcacaattgccagttaacgtcttccttctctctctgtcatag

 |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

 caccctaaaaggctggaaacaggcaattactggcatctaccagcactagtttcttgaca

 cgcgatgatgagtgagtgtcttgggtgagcctggagcatg

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

.
 aggtgactccgactcctcctttatccaatgtgctcctcatggccactgttgctgggcct

 ctctgtcatggggaatccccagatgcacccaggaggggccctctcccactgcatctgtca

 cttcacagccctgcgtaaactccctgtgctaggtcttttgcaggcacagcttttctcc

.
 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
 CTCACCTCCACCGTGCAGCTCATCACGCAGCTCATGCCCTTCGGCTGCCTCCTGGACTAT
 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

 tgcggtctgcgctcctgggatatagcaagagtttgccatggggatatgtgtgtgcgtgcatg

 cagcacacacacattcctttattttggattcaatcaagttgatcttcttgtgcacaaatc

 agtgcctgtcccatctgcatgtggaaactctcatcaatcagctacctttgaagaattttc

 tctttattgagtgctcagtgtggtctgatgtctctgttcttatttctctggaattctttg

 . . .
 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

 cagcattttcctgacaccagggaccaggctgccttcccactagctgtattgtttaacaca

 tgcaggggaggatgctctccagacattctgggtgagctcgagcagctgctgctggcagc

 tgggtccagccagggtctcctggtagtgtgagccagagctgctttgggaacagtacttgc

 tgggacagtgaatgaggatgttatccccaggatgattagcaaagttaggtttcagtc

 tctccctgcaggatatataagtccccttcaatagcg

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

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. . . . .
tgggccctgaaaacacacgcagacctggatgagtgaggccactgggcacaccagggtc
. . . . .
ccagctcaccagagcagcctgggacacagagggtgctcagaaacctaccagagcagccct
. . . . .
gaactccgtcagactgaaatcccctgttgccgggaggaggcgccgggcctgggggacggg
. . . . .
tcctggggtgatctggctcgtctgtgtgtgtcactcgtaattaggtccagagtgagtaa
. . . . .
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
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Exon 23 | Start: 184686 | End: 184832 | Length: 146

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. . . . .
gttaattaccaaagtttaccacttatcagtcacttactacttgctgggcattgcactaag

. . . . .
catttcagttgtattatcttggtgggtccttacagcaatcctgtgaaacagatactgcta

. . . . .
ttacccactttatagagaggttagactgaggcttccagcattgaagcaaattgcccaaga

. . . . .
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
```

.
 ttgcaagcaaataaaactaaagtcttccgcaagccattacaccaaataattctatt

 cgctgagttactcaatgaaataccgag

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

.
 cagaccacactgctccatcccctcaggcgtaacacaggatgctgacccaggaagagtg

 ggcgtagaaaaactagagggcattattgttattctgattcaaatgtacagtgctggcatg

 gtctttaaacagtaaccagtactagctggccaagacagaaaagtctaccacaaagacttg

 gttctttcatcacttatttgactggaagtgtcgcatcaccaatgccttctttaagcaatg

.
 ccatctttatcatttcttccagtgttctaattgcactgttttttctattccttccccag

2851	2861	2871	2881	2891	2901
GCTGGATGATAGACG	CAGATAGTCGCCA	AAGTTCCGTGAGT	TGATCATCGAATT	CTCCA	
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
AAATGGCCCGAGAC	CCCCAGCGCTAC	CTTGTCATTG	AGgtacaaattg	cagtctgtg	ctt		
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
 BE AWARE: This section overlaps with the following exon

.
 cacagcaaggtgcacactcgatgaatgctgcagcttcttcctttctgtttcctcagaag

 ctatttgaatctcatgtaggggctttcaagcatcaaaggatggttcatgttttattttaa

 ggcaccacatcatgtcatgaggggaggcagctataatttagagaaccaagggggatttc

 attataacaaaattggcaaacacacaggcacctgctggcaatagaccctgctcctatag

 ccaagaagtggaatagcatctctacgggccatttctaatagcctcaaaatctctgcaccag
 |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

.
 ataaccatctagtgaaactcacatggatatgaagtcaattttaaccaaaggtaaaatca

 aatcaaaaataaattaagtgatttaattatgttgcttgcaacaacttgattgtaag

 ccttttaggtccactatggaatgtaattaaatcaaaactaaacctagttgctctaaaact

 aacgattaagacaaaaattaacaccttcacaatataccctccatgag

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

.
 tctagtgaaactcacatggatatgaagtcaattttaaccaaaggtaaaatcaaaatcaa

 aataaattaagtgatttaattatgttgcttgcaacaacttgattgtaagcctttta

 ggtccactatggaatgtaattaaatcaaaactaaacctagttgctctaaaactaacgatt

 aagacaaaaattaacaccttcacaatataccctccatgaggcacaccacctgcattcag

 gaaaagtggtgatgatgtggtacaagcattccatgggcaacttctctgtttcttttcag

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

.
 accttataagccagaattttacagctctccactatggctctattttacatggaaaatgcct

 taacctaaataattttaaccagataatcttgagttttcttctgtgtgggtttttccct

 gcacggctgtcacgcctcacagtgcggttcaaagcgtgactcctggaccagtagtagcat

.
 cgcttggccttggttagaaacgccatttttcaggccactgccccagtttgaccaaatacagg

 acctctgggggtggcaccagtagtctatgtttgagccactttccagg

Exon 27 | Start: 188486 | End: 188594 | Length: 108

.
 ctcacacatgtgaagtgtccagtagccacacgtggctagtggtagaccgtattgaagagca

 ccgctcatagcacacctccctcactgcggaagtctgtgttacagcaccagcacagcc

 ctgtgcccaccctgcagcctgtggcccagtagcaccagcaccaccagggtgcagactc

 tcaggcctgcccactactaatcagaaccagcatctcaaggagatctcgggtgattttt

.
 gcaaactgaagttggggcagccctgaccggagtaaccttccctcatttcctcctgcag
 |3171 |3181 |3191 |3201 |3211 |3221
 CTGCAAAGCTGTCCCATCAAGGAAGACAGCTTCTTGCAGCGATACAGCTCAGACCCACA
 L Q S C P I K E D S F L Q R Y S S D P T
 |1061 |1071
 |3231 |3241 |3251 |3261 |3271. .
 GGC GCCTTGACTGAGGACAGCATAGACGACCTTCCTCCAGTGCCTGgtgagtggtt
 G A L T E D S I D D T F L P V P E
 |1081 |1091

.
 gtctggaacagtcctgtctcctcaacctcctcgaccactcagcagcagccagtcctccag

 tgtccaagccaggtgtcctccagcatctccagagggggaacagtggtgagatttgca

 acacagtggaagggcgtaaggagcagataaacacatgaccgagcctgcacaagctcttgt

.
tgtgtctggttggttgctgtacctctgttgtaagaatgaatctgcaaaatttctagctta
.
tgaagcaaatcacggacatacacatctgtgtgtgtgagtgttcatgatg

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

.
acacatcacacatatatgtatacatgcatacacatacacacacacatacacacactctcc
.
tcaaggcagtttatcctctgagaactttaattacaaaagacacatatgtccattactt
.
tgagaaggacaggaaagaaccactttcttttgagcaacagcaagagggccctcccgag
.
gctcctgctccctgtcataagtctccttggtgaggacattcacagggttcagaaccagg
.
gatcctgcatgggatgggtgctttgctgattacttcacctctgatttctttccactttcag

3281	3291	3301	3311	3321	3331
AATACATAAACCAGTCCGTTCCCAAAAGGCCCGCTGGCTCTGTGCAGAAATCCTGTCTATC					
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
CTGCAGTGGGCAACCCCGAGTATCTCAACACTGTCCAGCCACCTGTGTCAACAGCACAT					
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
TCGACAGCCCTGCCCACTGGGCCAGAAAGGCAGCCACCAAATTAGCCTGGACAACCCCTG					
D	S	P	A	H	W
	A	Q	K	G	S
		H	Q	I	S
			L	D	N
			P	D	

|1161 |1171
 |3521 |3531 |3541 |3551 |3561 |3571
 ACTACCAGCAGGACTTCTTTCCCAAGGAAGCCAAGCCAAATGGCATCTTTAAGGGCTCCA
 Y Q Q D F F P K E A K P N G I F K G S T
 |1181 |1191
 |3581 |3591 |3601 |3611 |3621 |3631
 CAGCTGAAAATGCAGAATACCTAAGGGTCGCGCCACAAAGCAGTGAATTTATTGGAGCAT
 A E N A E Y L R V A P Q S S E F I G A *
 |1201 |1211
 |+1 |+11 |+21 |+31 |+41 |+51
 GACCACGGAGGATAGTATGAGCCCTAAAAATCCAGACTCTTCGATACCCAGGACCAAGC

 |+61 |+71 |+81 |+91 |+101 |+111
 CACAGCAGGTCTCTCCATCCCAACAGCCATGCCCAGATTAGCTCTTAGACCCACAGACTGG
 |+121 |+131 |+141 |+151 |+161 |+171
 TTTTGCAACGTTTACACCGACTAGCCAGGAAGTACTTCCACCTCGGGCACATTTTGGGAA
 |+181 |+191 |+201 |+211 |+221 |+231
 GTTGCAATCCTTTGTCTTCAAACGTGAAGCATTTACAGAAACGCATCCAGCAAGAATAT
 |+241 |+251 |+261 |+271 |+281 |+291
 TGTCCCTTTGAGCAGAAATTTATCTTTCAAAGAGGTATATTTGAAAAAAAAAAAAAGTAT
 |+301 |+311 |+321 |+331 |+341 |+351
 ATGTGAGGATTTTTATTGATTGGGGATCTTGGAGTTTTTCATTGTCGCTATTGATTTTAA
 |+361 |+371 |+381 |+391 |+401 |+411
 CTTCAATGGGCTCTTCCAACAAGGAAGAAGCTTGCTGGTAGCACTTGCTACCCTGAGTTC
 |+421 |+431 |+441 |+451 |+461 |+471
 ATCCAGGCCCAACTGTGAGCAAGGAGCACAAGCCACAAGTCTTCCAGAGGATGCTTGATT
 |+481 |+491 |+501 |+511 |+521 |+531
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 |+541 |+551 |+561 |+571 |+581 |+591
 GGCCCCAGCAGGCCGGATCGGTACTGTATCAAGTCATGGCAGGTACAGTAGGATAAGCCA
 |+601 |+611 |+621 |+631 |+641 |+651
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+661	+671	+681	+691	+701	+711
TTTGTA AAAATGTCCCCACGGTACTTACTCCCCACTGATGGACCAGTGGTTTCCAGTCAT					
+721	+731	+741	+751	+761	+771
GAGCGTTAGACTGACTTGTGTTGTCTTCCATTCCATTGTTTTGAAACTCAGTATGCTGCCC					
+781	+791	+801	+811	+821	+831
CTGTCTTGCTGTGCATGAAATCAGCAAGAGAGGATGACACATCAAATAATAACTCGGATTC					
+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
GATAATGCTTTCACAACATTTGCAGATGTTTTAGAAGGAAAAAAGTTCCTTCCTAAAAATA					
+1381	+1391	+1401	+1411	+1421	+1431
ATTTCTCTACAATTGGAAGATTGGAAGATTCAGCTAGTTAGGAGCCCACCTTTTTTCCTA					
+1441	+1451	+1461	+1471	+1481	+1491
ATCTGTGTGTGCCCTGTAACCTGACTGGTTAACAGCAGTCCTTTGTAAACAGTGTTTTAA					
+1501	+1511	+1521	+1531	+1541	+1551
ACTCTCTAGTCAATATCCACCCCATCCAATTTATCAAGGAAGAAATGGTTCAGAAAAATA					


```

      |+1561      |+1571      |+1581      |+1591      |+1601      |+1611
TTTTCAGCCTACAGTTATGTTTCAGTCACACACACATACAAAATGTTCCCTTTGCTTTTAA

      |+1621      |+1631      |+1641      |+1651      |+1661      |+1671
AGTAATTTTGGACTCCCAGATCAGTCAGAGCCCCTACAGCATTGTTAAGAAAAGTATTGA

      |+1681      |+1691      |+1701      |+1711      |+1721      .      .
TTTTTGTCTCAATGAAAATAAACTATATTTCATTCCACTCTAttatgctctcaaatacc

      .      .      .      .      .      .      .      .      .      .
cctaagcatctatactagcctgggtatgggtatgaaagatacaaagataaaataaaacatag

      .      .      .      .      .      .      .      .      .      .
tccctgattctaagaaattcacatttagcaaaggaaatggactcatagatgctaacctt

      .      .      .      .      .      .      .      .      .      .
aaaacaacgtgacaaatgccagacaggacccatcagccaggcactgtgagagcacagagc

      .      .      .      .      .      .      .      .      .      .
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      .      .      .      .      .      .      .      .      .      .
gtctcagtcagcggggagggtggaaagtgcaggtgcatcagggg

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LRG Parser: Version: 0.2, Version Date: 11/02/2015
Reader: Version: 0.2, Version Date: 11/02/2015
Writer: Version: 0.2, Version Date: 11/02/2015
Control: Version: 0.2, Version Date: 11/02/2015

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