

Gene: CALR - Sequence: NG_029662.1
 Transcript: NM_004343.3 - Protein: NP_004334.1
 Date : February 23, 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 MIDDLE base of codon
 4th line: Amino acid numbering. Numbered on 1st and increments of 10

Exon 1 | Start: 5001 | End: 5171 | Length: 170

```

. . . . .
ggcgggggttggttcaggtctggtcacatgacctggcctgaggtgctcgcggccccacc

. . . . .
ccaccagtgggcgtccccccacgcgtggtcgaccatcattggtcgggtggtgaggccaat

. . . . .
agaaatcgccatctgggaacccagcgttccgaggcgcagcctaacatagtgaaccgacg

. . . . .
aaggtccaatggaaaaagacggccatgggcatagaccaatgacaaagtggcaggggcg

. . . . .
cccaaggcctgggtcaggttggttgagaggcgggtgggtataaaagtgaaggcggcg

|-79      |-69      |-59      |-49      |-39      |-29
GCGGCGTCCGTCCGTACTGCAGAGCCGCTGCCGAGGGTCGTTTTAAAGGGCCCGCGCGT

|-19      |-9       |1       |11      |21      |31
TGCCGCCCCCTCGGCCGCCATGCTGCTATCCGTGCCGCTGCTGCTCGGCCTCCTCGGCC
      M L L S V P L L L G L L G L
      |1                               |11

|41      |51      |61      |71      |81      |91 .
TGGCCGTCGCCGAGCCTGCCGTCTACTTCAAGGAGCAGTTTCTGGACGGAGgtaacgcct
  A V A E P A V Y F K E Q F L D G D
      |21                               |31

. . . . .
ggtcccgctcgcaggccgccccgacgacgcggccggcccccgatcctggatctgcgttgt

. . . . .
cgcccgtaattaccgtttagaggtccaacacgggtggcctcccgaggactagagccgcgggc

```

.
gatttctcttctgctccctggggagcgcgaggcgtagcggcctcccgcggcgggagt
.
tagggttagcccgaggatctctgaaggcacccgacgtgtcaaactagaggttggaatggg
.
gagtgtcggggatctcctttcctgtccccagcagcttgtggctctcggcag

Exon 2 | Start: 5535 | End: 5636 | Length: 101
BE AWARE: This intron is shared with the following exon

.
cgttgtcgcgcgaattaccgttttagaggtccaacacggtggcctcccgggactagagcc
.
gcgggcgatttctcttctgctccctggggagcgcgaggcgtagcggcctcccgcggc
.
gggagttagggttagcccgaggatctctgaaggcacccgacgtgtcaaactagaggttgg
.
aatggggagtgctggggatctcctttcctgtccccagcagcttgtggctctcggcagatg
.
tttggtgtgggggggattagcacagccgctctgacctaccctctaataccccacttag

	101	111	121	131	141	151
ACGGGTGGACTTCCCGTGGATCGAATCCAAACACAAGTCAGATTTTGGCAAATTCGTTC						
G W T S R W I E S K H K S D F G K F V L						
			41			51

	161	171	181	191	.	.	.
TCAGTTCGGGCAAGTTCTACGGTGACGAGGAGAAAGATAAAGgtaagagcctaggagtgg							
S S G K F Y G D E E K D K G							
			61				

.
gtgtcagatccgggaggacttcctggcagaagtccttgtctgtacacacacagccggga
.
cagtccccttgaggagg

Exon 3 | Start: 5829 | End: 6032 | Length: 203

BE AWARE: This intron is shared with the previous exon

.
acaggtggaggaagtgggggagtccttctctattctctaagtcgagggtcctcgcgagtca

. |201 |211
aggcccaacggtgacctcactaccgtcccgtctcagGTTTGACAGACAAGCCAGGATGCAC
L Q T S Q D A R
|71

|221 |231 |241 |251 |261 |271
GCTTTTATGCTCTGTCGCCAGTTTCGAGCCTTTCAGCAACAAAGGCCAGACGCTGGTGG
F Y A L S A S F E P F S N K G Q T L V V
|81 |91

|281 |291 |301 |311 |321 |331
TGCAGTTCACGGTGAAACATGAGCAGAACATCGACTGTGGGGGCGGCTATGTGAAGCTGT
Q F T V K H E Q N I D C G G G Y V K L F
|101 |111

|341 |351 |361 |371 |381 |391
TTCCTAATAGTTTGGACCAGACAGACATGCACGAGACTCAGAATACAACATCATGTTTG
P N S L D Q T D M H G D S E Y N I M F G
|121 |131

.
gtgagggcctgcttcctggtgctgatctctgtcccattagtttagaggagacccagaccc

.
cattgactttcttaataatgatttttttgggaaggggagctaaaagaataagtcccagca

.
acaatttattgcattatgatcgagatctaggctgttaatttaatttgctgtttgtata

.
tagttatttcccaatcttactaatgaggattttgagttctagagcactgattttttttt

.
ttctcctttaaaacttaaggctccacccacagcccattcaggacagaatcagggtctgagt

Exon 4 | Start: 6454 | End: 6548 | Length: 94

BE AWARE: This intron is shared with the following exon

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. . . . .
caatttattgcattatgatcgagatctaggctgttaatttaatttgcgtgtttgtatat

. . . . .
agttatttcccaatcttactaatgaggattttgagttctagagcactgatttttttttt

. . . . .
tctcctttaacttaaggctccaccacagcccattcaggacagaatcagggctctgagtt

. . . . .
tctcttctcagccttgacagacccgagttgaagaaccaggtcttcctttataaagaggg

. . . . .
gtgagagcctcgagatgatgggtagtctctgactcttaactggatctgcttcacacctag

|401      |411      |421      |431      |441      |451
GTCCCGACATCTGTGGCCCTGGCACCAAGAAGGTTTCATGTCATCTTCAACTACAAGGGCA
P D I C G P G T K K V H V I F N Y K G K
|141                                |151

|461      |471      |481      |491      . . . . .
AGAACGTGCTGATCAACAAGGACATCCGTTGCAAGgtgtgcctgggggtgggtggcaaatg
N V L I N K D I R C K
|161

. . . . .
gctgtcatggggagattcaga
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Exon 5 | Start: 6644 | End: 6853 | Length: 209
BE AWARE: This intron is shared with both adjacent exons

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. . . . . |501
ggtcagcctcattgggggggtggcccccgcctcaccttcttccttcttcagGATGATGAGTT
D D E F

|511      |521      |531      |541      |551      |561
TACACACCTGTACACACTGATTGTGCGGCCAGACAACACCTATGAGGTGAAGATTGACAA
T H L Y T L I V R P D N T Y E V K I D N
|171                                |181

|571      |581      |591      |601      |611      |621
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CAGCCAGGTGGAGTCCGGCTCCTTGAAGACGATTGGGACTTCCTGCCACCCAAGAAGAT
 S Q V E S G S L E D D W D F L P P K K I
 |191 |201

 |631 |641 |651 |661 |671 |681
 AAAGGATCCTGATGCTTCAAAACCGGAAGACTGGGATGAGCGGGCCAAGATCGATGATCC
 K D P D A S K P E D W D E R A K I D D P
 |211 |221

 |691 |701
 CACAGACTCCAAGCCTGAGgttggtgtttgggcaggggctctgctctccacattggaggg
 T D S K P E
 |231

tgt

Exon 6 | Start: 6942 | End: 7055 | Length: 113
 BE AWARE: This intron is shared with both adjacent exons

. |711
 ggaagacatctgggccaactctgatctcttcatctacccccagGACTGGGACAAGCCCG
 D W D K P E

|721 |731 |741 |751 |761 |771
 AGCATATCCCTGACCCTGATGCTAAGAAGCCCGAGGACTGGGATGAAGAGATGGACGGAG
 H I P D P D A K K P E D W D E E M D G E
 |241 |251

|781 |791 |801 |811
 AGTGGGAACCCCCAGTGATTGAGAACCCCTGAGTACAAGgtgagtttggggctctgagcag
 W E P P V I Q N P E Y K
 |261 |271

. . . .
 ggctggggctcacagtggggag

Exon 7 | Start: 7145 | End: 7288 | Length: 143
 BE AWARE: This intron is shared with the previous exon

. |821 |831

tgcaccaaccttactcacccttcggtttccttctcccttctgcagGGTGAGTGGAAGCCC
 G E W K P

|841 |851 |861 |871 |881 |891
 CGGCAGATCGACAACCCAGATTACAAGGGCACTTGGATCCACCCAGAAATTGACAACCCC
 R Q I D N P D Y K G T W I H P E I D N P
 |281 |291

|901 |911 |921 |931 |941 |951
 GAGTATTCTCCCGATCCAGTATCTATGCCTATGATAACTTTGGCGTGCTGGGCCTGGAC
 E Y S P D P S I Y A Y D N F G V L G L D
 |301 |311

CTCTGGCAGgtgagacttggaggaaaaaggaggatccctgggggtacctaagtgcataag
 L W Q

atcacccaaggaggaaaggacagggtaggcaccacaggtgagctgactcaaaaatggta

cttcttgtaaacagtacttcctggtctgtccctgtgaagtcctcacagcaaccctttaa

ggttatacttgctgtgcaccaagtacttccccagtgacttttatgcaaatcaacttcttt

acccccaagacctagaaggtggtcaggtaaccagtgtagctggggctgggcacag

tggctcacc

Exon 8 | Start: 9938 | End: 10030 | Length: 92

accacgcctggctgattttttgtatttttagtagagacggggtttcacctgttagccag

ggtggtctcgatctcctgacctcgtgatccgccaccttggcctctgggcgaggattaca

ggcgtgatccacctcacctggcctctccatcttttaactgcagtgtcagcgggtgttcct


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|1131      |1141      |1151      |1161      |1171      |1181
AGAGGAGGAGGAGGCAGAGGACAAGGAGGATGATGAGGACAAAGATGAGGATGAGGAGGA
E E E E A E D K E D D E D K D E D E E D
      |381                      |391

|1191      |1201      |1211      |1221      |1231      |1241
TGAGGAGGACAAGGAGGAAGATGAGGAGGAAGATGTCCCCGGCCAGGCCAAGGACGAGCT
E E D K E E D E E E D V P G Q A K D E L
      |401                      |411

|1251      |*11      |*21      |*31      |*41      |*51
GTAGAGAGGCCTGCCCTCCAGGGCTGGACTGAGGCCTGAGCGCTCCTGCCGCAGAGCTGGC
*

      |*61      |*71      |*81      |*91      |*101     |*111
CGCGCCAAATAATGTCTCTGTGAGACTCGAGAACTTTCATTTTTTCCAGGCTGGTTCGG

      |*121     |*131     |*141     |*151     |*161     |*171
ATTTGGGGTGGATTTTGGTTTTGTCCCCCTCCTCCACTCTCCCCACCCCTCCCCGCCC

      |*181     |*191     |*201     |*211     |*221     |*231
TTTTTTTTTTTTTTTTTAAACTGGTATTTTATCTTTGATTCTCCTTCAGCCCTCACCCC

      |*241     |*251     |*261     |*271     |*281     |*291
TGGTTCTCATCTTTCTTGATCAACATCTTTTCTTGCCTCTGTCCCCTTCTCTCATCTCTT

      |*301     |*311     |*321     |*331     |*341     |*351
AGCTCCCCTCCAACCTGGGGGGCAGTGGTGTGGAGAAGCCACAGGCCTGAGATTTTCATCT

      |*361     |*371     |*381     |*391     |*401     |*411
GCTCTCCTTCTCTGGAGCCCAGAGAGGGCAGCAGAAGGGGGTGGTGTCTCCAACCCCCCA

      |*421     |*431     |*441     |*451     |*461     |*471
GCACTGAGGAAGAACGGGGCTCTTCTCATTTACCCCTCCCTTTCTCCCCTGCCCCAGG

      |*481     |*491     |*501     |*511     |*521     |*531
ACTGGGCCACTTCTGGGTGGGGCAGTGGGTCCCAGATTGGCTCACACTGAGAATGTAAGA

      |*541     |*551     |*561     |*571     . . .
ACTACAAACAAAATTTCTATTAAATTAATTTTGTGTCTCCctcctgtgtctctcttctgg

. . . . .
ggaaagacagacttaaggaaaccagcagtggtctttttgggggggggggggtttccag

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.
tataatctcctttttcagctattgctagagaggttgctgagtggtccacaagattccaggg
.
acccttattttaccccataaccctcaaaaccaacgggggaatggctggttgctgctgtaa
.
actccacataactaacttactgaatccttgaacctaactggttaagttttggttctgcttat
.
ttattttattttaagatagactctcgctctgttggtccaggc

LRG Parser: Version: 1.1, Version Date: 11/02/2015
Reader: Version: 1, Version Date: 11/02/2015
Writer: Version: 1, Version Date: 11/02/2015
Control: Version: 1, Version Date: 11/02/2015