

Gene: MECP2 - Sequence: NG\_007107.2  
Transcript: NM\_004992.3 - Protein: NP\_004983.1  
Date : February 23, 2015

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

Exon 1 | Start: 44391 | End: 44518 | Length: 127

```
. . . . .
ctaaaccagtcctccgcgcccaagccgcctcttttccccaacgacggccgaaagcagc

. . . . .
caatcaacagctggaggggtccgcccccttttccctggccgaaatggacaggaaatctcg

. . . . .
ccaattgacggcatcgccgctgagacctccccctccccgtcctccccgtcccagcccg

. . . . .
gccatcacagccaatgacgggcggtcgagcgccgagggcggggcggggcgcgcg

. . . . .
aggtgcagcagcgcggggccgccaagagggcggggcgacgtcgccgtgctgggggtc

      |-219      |-209      |-199      |-189      |-179      |-169
CCGGCGTCGGCGGCGCGCGCTCCCTCCTCTCGGAGAGAGGGCTGTGGTAAAGCCGTC

      |-159      |-149      |-139      |-129      |-119      |-109
CGGAAAATGGCCGCCGCCGCCGCCGCCGAGCGGAGGAGGAGGAGGAGGCGAGGAG

      |-99 . . . . .
GAGAGACTgtgagtgggaccgccgtggccgcgggcggggacccttgccggggggcggggg

. . . . .
tcaggggcggggacgtggcgcgggaggggcccgcgggggtcgacgacacggctggcggtatg

. . . . .
gcgtccctcctctctaccctccccctcccgcccgccggtggcgactctccctcggcc

. . . . .
cgtcaccggtgctcgcggtgacctcctcggcgggcctccctggagccgccttcgcct
```

. . . . .  
 gacgcccctcttcctcccgccctcgacgcgcaccccgccccggccccgcggcgcccc  
 . . .  
 tgtcgccg

Exon 2 | Start: 49814 | End: 49937 | Length: 123

. . . . .  
 agaagaaatacttgccagaaatcgccactcatggtagctttttagtggtcgaagtgtcc  
 . . . . .  
 cctagaggtgacaaggcttgtagatgttgattctaacaagcatgaatctttcctttat  
 . . . . .  
 ttttagcactgtgtgttacgtgccagtaatttgacgttatcctttgtttctagctaggtta  
 . . . . .  
 agctgggaaatagcctagtactttgtctatgtgtttatcttcaaaatgtcccaaatagcc  
 . . . . .  
 ctgggaaaaaggctcgtgcagctcaatgggggctttcaactacaattttctttgttttag

	-89	-79	-69	-59	-49	-39
	GCTCCATAAAAATACAGACTCACCAGTTCCTGCTTTGATGTGACATGTGACTCCCCAGAA					
	-29	-19	-9	1	11	21
	TACACCTTGCTTCTGTAGACCAGCTCCAACAGGATTCCATGGTAGCTGGGATGTTAGGC					
				M	V	A
				G	M	L
				1		

. . . . .  
 TCAGgtaagtaaccttccttttttttttagtatatgtcctggtttggccatctgttt  
 R

. . . . .  
 ttttttttttaaaaaaaaaaaaaaaggaaaagaggaaaaaatatactactcttggac  
 . . . . .  
 agtataaaagtaccccaaagactaaagacataactgtgccaaactgtgccatataataaa  
 . . . . .  
 aaaaagtcacttcctgagccctgaaaggtcagtggtgttagggttacttggtcgccaca

. . . . .  
gcgtgatctggggcggtcagattagagccggaactggtgatctgcaacttcagttc  
.  
acct

Exon 3 | Start: 109571 | End: 109921 | Length: 350

. . . . .  
gccgcagtgtttccgctcagaggaagggtctgattctcctgcagtgctaggagacttg  
.  
tgggtggccacagtgcaggtcaggcacaccggccagcaccacccacagcccaaattccta  
.  
aagaaatatgtgggtcccagcttggcccagtgctctgttgcctggggaaggacatcaag  
.  
atctgagtgtatgatggcctggggccttgcatgtggtgggggtccaagcctgcctctgct  
.  
cacttgttctgcagactggcatgttctctgtgatacttacatacttgtttaacacttcag

31	41	51	61	71	81
GGAAGAAAAAGTCAGAAGACCAGGACCTCCAGGGCCTCAAGGACAAACCCCTCAAGTTTAA					
E	E	K	S	E	D
	Q	D	L	Q	G
				L	K
				D	K
				P	L
				K	F
				K	

91	101	111	121	131	141
AAAGGTGAAGAAAGATAAGAAAGAAGAGAAAGAGGGCAAGCATGAGCCCGTGCAGCCATC					
K	V	K	K	D	K
		K	E	E	K
			E	G	K
			H	E	P
			V	Q	P
			S		

151	161	171	181	191	201
AGCCCACCACTCTGCTGAGCCCGCAGAGGCAGGCAAAGCAGAGACATCAGAAGGGTCAGG					
A	H	H	S	A	E
	P	A	E	A	G
		K	A	E	T
		S	E	G	S
		G			

211	221	231	241	251	261
CTCCGCCCCGGCTGTGCCGAAGCTTCTGCCCTCCCCAAACAGCGGCGCTCCATCATCCG					
S	A	P	A	V	P
	E	A	S	A	S
		P	K	Q	R
		R	R	S	I
		I	I	R	



P Q G K A F R S K V E L I A Y F E K V G  
 |131 |141  
 |441 |451 |461 |471 |481 |491  
 CGACACATCCCTGGACCCTAATGATTTTGA CTTACGGTAACTGGGAGAGGGAGCCCCTC  
 D T S L D P N D F D F T V T G R G S P S  
 |151 |161  
 |501 |511 |521 |531 |541 |551  
 CCGGCGAGAGCAGAAACCACCTAAGAAGCCCAAATCTCCCAAAGCTCCAGGAAGTGGCAG  
 R R E Q K P P K K P K S P K A P G T G R  
 |171 |181  
 |561 |571 |581 |591 |601 |611  
 AGGCCGGGGACGCCCCAAAGGGAGCGGCACCACGAGACCCAAGGCGGCCACGTCAGAGGG  
 G R G R P K G S G T T R P K A A T S E G  
 |191 |201  
 |621 |631 |641 |651 |661 |671  
 TGTGCAGGTGAAAAGGGTCCTGGAGAAAAGTCCTGGGAAGCTCCTTGTCAAGATGCCTTT  
 V Q V K R V L E K S P G K L L V K M P F  
 |211 |221  
 |681 |691 |701 |711 |721 |731  
 TCAAAGTTCGCCAGGGGGCAAGGCTGAGGGGGTGGGGCCACCACATCCACCCAGGTCAT  
 Q T S P G G K A E G G G A T T S T Q V M  
 |231 |241  
 |741 |751 |761 |771 |781 |791  
 GGTGATCAAACGCCCCGGCAGGAAGCGAAAAGCTGAGGCCGACCCTCAGGCCATTCCCAA  
 V I K R P G R K R K A E A D P Q A I P K  
 |251 |261  
 |801 |811 |821 |831 |841 |851  
 GAAACGGGGCCGAAAGCCGGGGAGTGTGGTGGCAGCCGCTGCCGCCGAGGCCAAAAAGAA  
 K R G R K P G S V V A A A A A E A K K K  
 |271 |281  
 |861 |871 |881 |891 |901 |911  
 AGCCGTGAAGGAGTCTTCTATCCGATCTGTGCAGGAGACCGTACTCCCATCAAGAAGCG  
 A V K E S S I R S V Q E T V L P I K K R  
 |291 |301  
 |921 |931 |941 |951 |961 |971  
 CAAGACCCGGGAGACGGTCAGCATCGAGGTCAAGGAAGTGGTGAAGCCCTGCTGGTGTG  
 K T R E T V S I E V K E V V K P L L V S

	311		321
981	991	1001	1011
1021	1031		
CACCTCGGTGAGAAGAGCGGGAAAGGACTGAAGACCTGTAAGAGCCCTGGGCGGAAAAG			
T L G E K S G K G L K T C K S P G R K S			
	331		341
1041	1051	1061	1071
1081	1091		
CAAGGAGAGCAGCCCCAAGGGGCGCAGCAGCAGCGCCTCCTCACCCCCAAGAAGGAGCA			
K E S S P K G R S S S A S S P P K K E H			
	351		361
1101	1111	1121	1131
1141	1151		
CCACCACCATCACCACCACTCAGAGTCCCCAAAGGCCCCCGTGCCACTGCTCCCACCCCT			
H H H H H S E S P K A P V P L L P P L			
	371		381
1161	1171	1181	1191
1201	1211		
GCCCCACCTCCACCTGAGCCCGAGAGCTCCGAGGACCCACCAGCCCCCTGAGCCCCA			
P P P P P E P E S S E D P T S P P E P Q			
	391		401
1221	1231	1241	1251
1261	1271		
GGACTTGAGCAGCAGCGTCTGCAAAGAGGAGAAGATGCCAGAGGAGGCTCACTGGAGAG			
D L S S S V C K E E K M P R G G S L E S			
	411		421
1281	1291	1301	1311
1321	1331		
CGACGGCTGCCCCAAGGAGCCAGCTAAGACTCAGCCGCGGTTGCCACCGCGCCACGGC			
D G C P K E P A K T Q P A V A T A A T A			
	431		441
1341	1351	1361	1371
1381	1391		
CGCAGAAAAGTACAAACACCGAGGGGAGAGCGCAAAGACATTGTTTCATCCTCCAT			
A E K Y K H R G E G E R K D I V S S S M			
	451		461
1401	1411	1421	1431
1441	1451		
GCCAAGGCCAAACAGAGAGGAGCCTGTGGACAGCCGACGCCCGTGACCGAGAGAGTTAG			
P R P N R E E P V D S R T P V T E R V S			
	471		481
1461	*11	*21	*31
*41	*51		
CTGACTTTACACGAGCGGATTGCAAAGCAAACCAACAAGAATAAAGGCAGCTGTTGTCT			
*			

*61	*71	*81	*91	*101	*111
CTTCTCCTTATGGGTAGGGCTCTGACAAAGCTTCCCGATTAACTGAAATAAAAAATATTT					
*121	*131	*141	*151	*161	*171
TTTTTCTTTTCAGTAAACTTAGAGTTTCGTGGCTTCAGGGTGGGAGTAGTTGGAGCATTG					
*181	*191	*201	*211	*221	*231
GGGATGTTTTTCTTACCGACAAGCACAGTCAGGTTGAAGACCTAACCAGGGCCAGAAGTA					
*241	*251	*261	*271	*281	*291
GCTTTGCACTTTTCTAAACTAGGCTCCTTCAACAAGGCTTGCTGCAGATACTACTGACCA					
*301	*311	*321	*331	*341	*351
GACAAGCTGTTGACCAGGCACCTCCCCTCCCGCCCAAACCTTCCCCCATGTGGTCGTTA					
*361	*371	*381	*391	*401	*411
GAGACAGAGCGACAGAGCAGTTGAGAGGACACTCCCGTTTTTCGGTGCCATCAGTGCCCCG					
*421	*431	*441	*451	*461	*471
TCTACAGCTCCCCCAGCTCCCCCACCTCCCCCACTCCCAACCACGTTGGGACAGGGAGG					
*481	*491	*501	*511	*521	*531
TGTGAGGCAGGAGAGACAGTTGGATTCTTTAGAGAAGATGGATATGACCAGTGGCTATGG					
*541	*551	*561	*571	*581	*591
CCTGTGCGATCCCACCGTGGTGGCTCAAGTCTGGCCCCACACCAGCCCCAATCCAAAAC					
*601	*611	*621	*631	*641	*651
TGGCAAGGACGCTTCACAGGACAGGAAAGTGGCACCTGTCTGCTCCAGCTCTGGCATGGC					
*661	*671	*681	*691	*701	*711
TAGGAGGGGGGAGTCCCTTGAACACTGGGTGTAGACTGGCCTGAACCACAGGAGAGGAT					
*721	*731	*741	*751	*761	*771
GGCCCAGGGTGAGGTGGCATGGTCCATTCTCAAGGGACGTCCTCCAACGGGTGGCGCTAG					
*781	*791	*801	*811	*821	*831
AGGCCATGGAGGCAGTAGGACAAGGTGCAGGCAGGCTGGCCTGGGGTCAGGCCGGGCAGA					
*841	*851	*861	*871	*881	*891
GCACAGCGGGGTGAGAGGGATTCTAATCACTCAGAGCAGTCTGTGACTTAGTGGACAGG					
*901	*911	*921	*931	*941	*951
GGAGGGGGCAAAGGGGGAGGAGAAGAAAATGTTCTTCCAGTTACTTTCCAATTCTCCTTT					

*961	*971	*981	*991	*1001	*1011
AGGGACAGCTTAGAATTATTTGCACTATTGAGTCTTCATGTCCCCTTCAAAACAAACA					
*1021	*1031	*1041	*1051	*1061	*1071
GATGCTCTGAGAGCAAACCTGGCTTGAATTGGTGACATTTAGTCCCTCAAGCCACCAGATG					
*1081	*1091	*1101	*1111	*1121	*1131
TGACAGTGTGAGAACTACCTGGATTTGTATATATACCTGCGCTTGTTTTAAAGTGGGCT					
*1141	*1151	*1161	*1171	*1181	*1191
CAGCACATAGGGTTCCACGAAGCTCCGAACTCTAAGTGTGTGCTGCAATTTTATAAGG					
*1201	*1211	*1221	*1231	*1241	*1251
ACTTCCTGATTGTTTTCTTCTCCCTTCCATTTCTGCCTTTTGTTTCATTTTCATCCTTT					
*1261	*1271	*1281	*1291	*1301	*1311
CACTTCTTTCCCTTCCCTCCGTCCTCCTCCTAGTTCATCCCTTCTCTTCCAGGCAGC					
*1321	*1331	*1341	*1351	*1361	*1371
CGCGGTGCCCAACCACACTTGTTCGGCTCCAGTCCCCAGAACTCTGCCTGCCCTTTGCTCT					
*1381	*1391	*1401	*1411	*1421	*1431
CCTGCTGCCAGTACCAGCCCCACCCTGTTTTGAGCCCTGAGGAGGCCTTGGGCTCTGCTG					
*1441	*1451	*1461	*1471	*1481	*1491
AGTCCGACCTGGCCTGTCTGTGAAGAGCAAGAGAGCAGCAAGGTCTTGCTCTCCTAGGTA					
*1501	*1511	*1521	*1531	*1541	*1551
GCCCCCTCTTCCCTGGTAAGAAAAAGCAAAAGGCATTTCCACCCCTGAACAACGAGCCTT					
*1561	*1571	*1581	*1591	*1601	*1611
TTCACCCTTCTACTCTAGAGAAGTGGACTGGAGGAGCTGGGCCCCGATTTGGTAGTTGAGG					
*1621	*1631	*1641	*1651	*1661	*1671
AAAGCACAGAGGCCTCCTGTGGCCTGCCAGTCATCGAGTGGCCCAACAGGGGCTCCATGC					
*1681	*1691	*1701	*1711	*1721	*1731
CAGCCGACCTTGACCTCACTCAGAAGTCCAGAGTCTAGCGTAGTGCAGCAGGGCAGTAGC					
*1741	*1751	*1761	*1771	*1781	*1791
GGTACCAATGCAGAACTCCCAAGACCCGAGCTGGGACCAGTACCTGGGTCCCCAGCCCTT					
*1801	*1811	*1821	*1831	*1841	*1851
CCTCTGCTCCCCCTTTCCCTCGGAGTTCTTCTTGAATGGCAATGTTTTGCTTTTGCTCG					
*1861	*1871	*1881	*1891	*1901	*1911



ATGCAGACAGGGGGCCAGAACACCACACATTTCACTGTCTGTCTGGTCCATAGCTGTGGT  
 |\*1921 |\*1931 |\*1941 |\*1951 |\*1961 |\*1971  
 GTAGGGGCTTAGAGGCATGGGCTTGCTGTGGGTTTTTAATTGATCAGTTTTCATGTGGGA  
 |\*1981 |\*1991 |\*2001 |\*2011 |\*2021 |\*2031  
 TCCCATCTTTTAACTCTGTTTCAGGAAGTCCTTATCTAGCTGCATATCTTCATCATATT  
 |\*2041 |\*2051 |\*2061 |\*2071 |\*2081 |\*2091  
 GTGATATCCTTTTCTGTGTTTACAGAGATGTCTCTTATATCTAAATCTGTCCAACCTGAGA  
 |\*2101 |\*2111 |\*2121 |\*2131 |\*2141 |\*2151  
 AGTACCTTATCAAAGTAGCAAATGAGACAGCAGTCTTATGCTTCCAGAAACACCCACAGG  
 |\*2161 |\*2171 |\*2181 |\*2191 |\*2201 |\*2211  
 CATGTCCCATGTGAGCTGCTGCCATGAACTGTCAAGTGTGTGTTGTCTTGTGTATTTACAG  
 |\*2221 |\*2231 |\*2241 |\*2251 |\*2261 |\*2271  
 TTATTGTCCCTGGCTTCCTTACTATGGTGTAATCATGAAGGAGTGAAACATCATAGAAAC  
 |\*2281 |\*2291 |\*2301 |\*2311 |\*2321 |\*2331  
 TGTCTAGCACTTCCTTGCCAGTCTTTAGTGATCAGGAACCATAGTTGACAGTTCCAATCA  
 |\*2341 |\*2351 |\*2361 |\*2371 |\*2381 |\*2391  
 GTAGCTTAAGAAAAAACCGTGTTTGTCTCTTCTGGAATGGTTAGAAGTGAGGGAGTTTGC  
 |\*2401 |\*2411 |\*2421 |\*2431 |\*2441 |\*2451  
 CCCGTTCTGTTTGTAGAGTCTCATAGTTGGACTTTCTAGCATATATGTGTCCATTTCCCTT  
 |\*2461 |\*2471 |\*2481 |\*2491 |\*2501 |\*2511  
 ATGCTGTAAAAGCAAGTCCTGCAACCAAACCTCCCATCAGCCCAATCCCTGATCCCTGATC  
 |\*2521 |\*2531 |\*2541 |\*2551 |\*2561 |\*2571  
 CCTTCCACCTGCTCTGCTGATGACCCCCCAGCTTCACTTCTGACTCTTCCCCAGGAAGG  
 |\*2581 |\*2591 |\*2601 |\*2611 |\*2621 |\*2631  
 GAAGGGGGGTCAGAAGAGAGGGTGAGTCCTCCAGAACTCTTCTCCAAGGACAGAAGGCT  
 |\*2641 |\*2651 |\*2661 |\*2671 |\*2681 |\*2691  
 CCTGCCCCCATAGTGGCCTCGAACTCCTGGCACTACCAAAGGACACTTATCCACGAGAGC  
 |\*2701 |\*2711 |\*2721 |\*2731 |\*2741 |\*2751  
 GCAGCATCCGACCAGTTGTCACTGAGAAGATGTTTATTTTGGTCAGTTGGGTTTTTATG  
 |\*2761 |\*2771 |\*2781 |\*2791 |\*2801 |\*2811  
 TATTATACTTAGTCAAATGTAATGTGGCTTCTGGAATCATTGTCCAGAGCTGCTTCCCCG

*2821	*2831	*2841	*2851	*2861	*2871
TCACCTGGGCGTCATCTGGTCCTGGTAAGAGGAGTGCGTGGCCCACCAGGCCCCCTGTC					
*2881	*2891	*2901	*2911	*2921	*2931
ACCCATGACAGTTCATTTCAGGGCCGATGGGGCAGTCGTGGTTGGGAACACAGCATTTC					
*2941	*2951	*2961	*2971	*2981	*2991
GCGTCACTTTATTTTCATTTCGGGCCCCACCTGCAGCTCCCTCAAAGAGGCAGTTGCCAGC					
*3001	*3011	*3021	*3031	*3041	*3051
CTCTTTCCCTTCCAGTTTATTCCAGAGCTGCCAGTGGGGCTGAGGCTCCTTAGGGTTT					
*3061	*3071	*3081	*3091	*3101	*3111
CTCTCTATTTCCTTCTTCTTCCTCATTCCCTCGTCTTTCCCAAAGGCATCACGAGTCAG					
*3121	*3131	*3141	*3151	*3161	*3171
TCGCCTTTCAGCAGGCAGCCTTGGCGGTTTATCGCCCTGGCAGGCAGGGGCCCTGCAGCT					
*3181	*3191	*3201	*3211	*3221	*3231
CTCATGCTGCCCCCTGCCTTGGGGTCAGGTTGACAGGAGGTTGGAGGGAAAGCCTTAAGCT					
*3241	*3251	*3261	*3271	*3281	*3291
GCAGGATTCTCACCAGCTGTGTCCGGCCCAGTTTGGGGTGTGACCTCAATTTCAATTTT					
*3301	*3311	*3321	*3331	*3341	*3351
GTCTGTACTTGAACATTATGAAGATGGGGGCCTCTTTCAGTGAATTTGTGAACAGCAGAA					
*3361	*3371	*3381	*3391	*3401	*3411
TTGACCGACAGCTTTCAGTACCCATGGGGCTAGGTCATTAAGGCCACATCCACAGTCTC					
*3421	*3431	*3441	*3451	*3461	*3471
CCCCACCTTGTTCAGTTGTTAGTTACTACCTCCTCTCCTGACAATACTGTATGTCGTC					
*3481	*3491	*3501	*3511	*3521	*3531
GAGCTCCCCCAGGTCTACCCCTCCGGGCCCTGCCTGCTGGTGGGCTTGTATAGCCAGT					
*3541	*3551	*3561	*3571	*3581	*3591
GGGATTGCCGGTCTTGACAGCTCAGTGAGCTGGAGATACTTGGTCACAGCCAGGCGTAG					
*3601	*3611	*3621	*3631	*3641	*3651
CACAGCTCCCTTCTGTTGATGCTGTATTCCCATATCAAAAGACACAGGGGACACCCAGAA					
*3661	*3671	*3681	*3691	*3701	*3711
ACGCCACATCCCCCAATCCATCAGTGCCAAACTAGCCAACGGCCCCAGCTTCTCAGCTCG					

|\*3721      |\*3731      |\*3741      |\*3751      |\*3761      |\*3771  
 CTGGATGGCGGAAGCTGCTACTCGTGAGCGCCAGTGCGGGTGCAGACAATCTTCTGTTGG

|\*3781      |\*3791      |\*3801      |\*3811      |\*3821      |\*3831  
 GTGGCATCATTCCAGGCCGAAGCATGAACAGTGCACCTGGGACAGGGAGCAGCCCCAAA

|\*3841      |\*3851      |\*3861      |\*3871      |\*3881      |\*3891  
 TTGTCACCTGCTTCTCTGCCCAGCTTTTCATTGCTGTGACAGTGATGGCGAAAGAGGGTA

|\*3901      |\*3911      |\*3921      |\*3931      |\*3941      |\*3951  
 ATAACCAGACACAACTGCCAAGTTGGGTGGAGAAAGGAGTTTCTTTAGCTGACAGAATC

|\*3961      |\*3971      |\*3981      |\*3991      |\*4001      |\*4011  
 TCTGAATTTTAAATCACTTAGTAAGCGGCTCAAGCCCAGGAGGGAGCAGAGGGATACGAG

|\*4021      |\*4031      |\*4041      |\*4051      |\*4061      |\*4071  
 CGGAGTCCCCTGCGCGGGACCATCTGGAATTGGTTTAGCCCAAGTGGAGCCTGACAGCCA

|\*4081      |\*4091      |\*4101      |\*4111      |\*4121      |\*4131  
 GAACTCTGTGTCCCCCGTCTAACCACAGCTCCTTTTCCAGAGCATTCCAGTCAGGCTCTC

|\*4141      |\*4151      |\*4161      |\*4171      |\*4181      |\*4191  
 TGGGCTGACTGGGCCAGGGGAGGTTACAGGTACCAGTTCTTTAAGAAGATCTTTGGGCAT

|\*4201      |\*4211      |\*4221      |\*4231      |\*4241      |\*4251  
 ATACATTTTTCAGCTGTGTCATTGCCCCAAATGGATTCTGTTTCAAGTTCACACCTGCA

|\*4261      |\*4271      |\*4281      |\*4291      |\*4301      |\*4311  
 GATTCTAGGACCTGTGTCCTAGACTTCAGGGAGTCAGCTGTTTCTAGAGTTCCTACCATG

|\*4321      |\*4331      |\*4341      |\*4351      |\*4361      |\*4371  
 GAGTGGGTCTGGAGGACCTGCCCGGTGGGGGGGCAGAGCCCTGCTCCCTCCGGGTCTTCC

|\*4381      |\*4391      |\*4401      |\*4411      |\*4421      |\*4431  
 TACTCTTCTCTGCTCTGACGGGATTTGTTGATTCTCTCCATTTTGGTGTCTTTCTCTT

|\*4441      |\*4451      |\*4461      |\*4471      |\*4481      |\*4491  
 TTAGATATTGTATCAATCTTTAGAAAAGGCATAGTCTACTTGTATATAAATCGTTAGGATA

|\*4501      |\*4511      |\*4521      |\*4531      |\*4541      |\*4551  
 CTGCCTCCCCCAGGGTCTAAAATTACATATTAGAGGGGAAAAGCTGAACACTGAAGTCAG

|\*4561      |\*4571      |\*4581      |\*4591      |\*4601      |\*4611  
 TTCTCAACAATTTAGAAGGAAAACCTAGAAAACATTTGGCAGAAAATTACATTTTCGATGT

|\*4621      |\*4631      |\*4641      |\*4651      |\*4661      |\*4671

TTTTGAATGAATACGAGCAAGCTTTTACAACAGTGCTGATCTAAAAATACTTAGCACTTG

|\*4681 |\*4691 |\*4701 |\*4711 |\*4721 |\*4731  
GCCTGAGATGCCTGGTGAGCATTACAGGCAAGGGAATCTGGAGGTAGCCGACCTGAGGA

|\*4741 |\*4751 |\*4761 |\*4771 |\*4781 |\*4791  
CATGGCTTCTGAACCTGTCTTTTGGGAGTGGTATGGAAGGTGGAGCGTTCACCAGTGACC

|\*4801 |\*4811 |\*4821 |\*4831 |\*4841 |\*4851  
TGAAGGCCAGCACCACCCTCCTTCCCACTCTTCTCATCTTGACAGAGCCTGCCCCAGC

|\*4861 |\*4871 |\*4881 |\*4891 |\*4901 |\*4911  
GCTGACGTGTCAGGAAAACACCCAGGGAAGTGAAGGCACTTCTGCCTGAGGGGCAGCC

|\*4921 |\*4931 |\*4941 |\*4951 |\*4961 |\*4971  
TGCCTTGCCCACTCCTGCTCTGCTCGCCTCGGATCAGCTGAGCCTTCTGAGCTGGCCTCT

|\*4981 |\*4991 |\*5001 |\*5011 |\*5021 |\*5031  
CACTGCCTCCCAAGGCCCCCTGCCTGCCCTGTCAGGAGGCAGAAGGAAGCAGGTGTGAG

|\*5041 |\*5051 |\*5061 |\*5071 |\*5081 |\*5091  
GGCAGTGCAAGGAGGAGCACAACCCCCAGCTCCCGCTCCGGGCTCCGACTTGTGCACAG

|\*5101 |\*5111 |\*5121 |\*5131 |\*5141 |\*5151  
GCAGAGCCCAGACCCTGGAGGAAATCCTACCTTTGAATTCAAGAACATTTGGGGAATTTG

|\*5161 |\*5171 |\*5181 |\*5191 |\*5201 |\*5211  
GAAATCTCTTTGCCCCAAACCCCCATTCTGTCTACCTTTAATCAGGTCCTGCTCAGCA

|\*5221 |\*5231 |\*5241 |\*5251 |\*5261 |\*5271  
GTGAGAGCAGATGAGGTGAAAAGGCAAGAGGTTTGGCTCCTGCCCCACTGATAGCCCCTC

|\*5281 |\*5291 |\*5301 |\*5311 |\*5321 |\*5331  
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|\*5341 |\*5351 |\*5361 |\*5371 |\*5381 |\*5391  
CCAGTAACACATAGACTGTGCGCATAGGCCTGCTTTGTCTCCTCTATCCTGGGCTTTTGT

|\*5401 |\*5411 |\*5421 |\*5431 |\*5441 |\*5451  
TTTGCTTTTGTAGTTTGTCTTTAGTTTTCTGTCCCTTTTATTTAACGCACCGACTAGAC

|\*5461 |\*5471 |\*5481 |\*5491 |\*5501 |\*5511  
ACACAAAGCAGTTGAATTTTTATATATATATCTGTATATTGCACAATTATAAACTCATTT

|\*5521 |\*5531 |\*5541 |\*5551 |\*5561 |\*5571  
TGCTTGTGGCTCCACACACACAAAAAAGACCTGTAAAATTATACCTGTTGCTTAATTA

*5581	*5591	*5601	*5611	*5621	*5631
CAATATTTCTGATAACCATAGCATAGGACAAGGAAAAATAAAAAAAGAAAAAAGAAAA					
*5641	*5651	*5661	*5671	*5681	*5691
AAAAACGACAAATCTGTCTGCTGGTCACTTCTTCTGTCCAAGCAGATTCTGGTCTTTTC					
*5701	*5711	*5721	*5731	*5741	*5751
CTCGCTTCTTTCAAGGGCTTTCTGTGCCAGGTGAAGGAGGCTCCAGGCAGCACCCAGGT					
*5761	*5771	*5781	*5791	*5801	*5811
TTTGCACTCTTGTTTCTCCCGTGTGTGAAAGAGGTCCCAAGGTTCTGGGTGCAGGAGC					
*5821	*5831	*5841	*5851	*5861	*5871
GCTCCCTTGACCTGCTGAAGTCCGGAACGTAGTCGGCACAGCCTGGTCGCCTTCCACCTC					
*5881	*5891	*5901	*5911	*5921	*5931
TGGGAGCTGGAGTCCACTGGGGTGGCCTGACTCCCCAGTCCCCTTCCCGTGACCTGGTC					
*5941	*5951	*5961	*5971	*5981	*5991
AGGGTGAGCCCATGTGGAGTCAGCCTCGCAGGCCTCCCTGCCAGTAGGGTCCGAGTGTGT					
*6001	*6011	*6021	*6031	*6041	*6051
TTTCATCTTCCCACTCTGTGAGCCTGGGGGCTGGAGCGGAGACGGGAGGCCTGGCCTGT					
*6061	*6071	*6081	*6091	*6101	*6111
CTCGGAACCTGTGAGCTGCACCAGGTAGAACGCCAGGGACCCAGAATCATGTGCGTCAG					
*6121	*6131	*6141	*6151	*6161	*6171
TCCAAGGGGTCCCCTCCAGGAGTAGTGAAGACTCCAGAAATGTCCCTTTCTTCTCCCCCA					
*6181	*6191	*6201	*6211	*6221	*6231
TCCTACGAGTAATTGCATTTGCTTTTGTAATTCTTAATGAGCAATATCTGCTAGAGAGTT					
*6241	*6251	*6261	*6271	*6281	*6291
TAGCTGTAACAGTTCTTTTGTATCATCTTTTTTAATAATTAGAAACACCAAAAAAATCC					
*6301	*6311	*6321	*6331	*6341	*6351
AGAAACTTGTTCCTTCCAAAGCAGAGAGCATTATAATCACCAGGGCCAAAAGCTTCCCTCC					
*6361	*6371	*6381	*6391	*6401	*6411
CTGCTGTCAATTGCTTCTTCTGAGGCCTGAATCCAAAAGAAAAACAGCCATAGGCCCTTTC					
*6421	*6431	*6441	*6451	*6461	*6471
AGTGCCGGGCTACCCGTGAGCCCTTCGGAGGACCAGGGCTGGGGCAGCCTCTGGGCCCCA					

*6481	*6491	*6501	*6511	*6521	*6531
CATCCGGGGCCAGCTCCGGCGTGTGTTTCAGTGTTAGCAGTGGGTCATGATGCTCTTTCCC					
*6541	*6551	*6561	*6571	*6581	*6591
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*6601	*6611	*6621	*6631	*6641	*6651
GAACAGGTGGGTGTCTGCGTGCGTCCACGTGCGTGTTTTCTGACTGACATGAAATCGACG					
*6661	*6671	*6681	*6691	*6701	*6711
CCCGAGTTAGCCTCACCCGGTGACCTCTAGCCCTGCCCGGATGGAGCGGGGCCACCCGG					
*6721	*6731	*6741	*6751	*6761	*6771
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*6781	*6791	*6801	*6811	*6821	*6831
CTCCTTCCCTTGCTACCACGGCCTCCTTTCCGTTTGATTTGTCAGTCTTCAATCAATAA					
*6841	*6851	*6861	*6871	*6881	*6891
CAGCCGCTCCAGAGTCAGTAGTCAATGAATATATGACCAAATATCACCAGGACTGTTACT					
*6901	*6911	*6921	*6931	*6941	*6951
CAATGTGTGCCGAGCCCTTGCCCATGCTGGGCTCCCGTGATCTGGACACTGTAACGTGT					
*6961	*6971	*6981	*6991	*7001	*7011
GCTGTGTTTGCTCCCCTTCCCCTTCCCTTCTTTGCCCTTTACTTGTCTTTCTGGGGTTTTT					
*7021	*7031	*7041	*7051	*7061	*7071
CTGTTTGGGTTTGGTTTGGTTTTTATTTCTCCTTTTGTGTTCCAAACATGAGGTTCTCTC					
*7081	*7091	*7101	*7111	*7121	*7131
TACTGGTCCTCTTAACTGTGGTGTGAGGCTTATATTTGTGTAATTTTGGTGGGTGAAA					
*7141	*7151	*7161	*7171	*7181	*7191
GGAATTTTGCTAAGTAAATCTCTTCTGTGTTTGAAGTGAAGTCTGTATTGTAACATGTT					
*7201	*7211	*7221	*7231	*7241	*7251
TAAAGTAATTGTTCCAGAGACAAATATTTCTAGACACTTTTCTTTACAAACAAAAGCAT					
*7261	*7271	*7281	*7291	*7301	*7311
TCGGAGGGAGGGGATGGTGAAGTGAAGAGGGGAGAGCTGAACAGATGACCCCTGCC					
*7321	*7331	*7341	*7351	*7361	*7371
CAGATCAGCCAGAAGCCACCCAAAGCAGTGGAGCCCAGGAGTCCCACTCCAAGCCAGCAA					
*7381	*7391	*7401	*7411	*7421	*7431

GCCGAATAGCTGATGTGTTGCCACTTTCCAAGTCACTGCAAAACCAGGTTTTGTTCCGCC

|\*7441 |\*7451 |\*7461 |\*7471 |\*7481 |\*7491  
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|\*7501 |\*7511 |\*7521 |\*7531 |\*7541 |\*7551  
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|\*7561 |\*7571 |\*7581 |\*7591 |\*7601 |\*7611  
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|\*7621 |\*7631 |\*7641 |\*7651 |\*7661 |\*7671  
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|\*7681 |\*7691 |\*7701 |\*7711 |\*7721 |\*7731  
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|\*7741 |\*7751 |\*7761 |\*7771 |\*7781 |\*7791  
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|\*7801 |\*7811 |\*7821 |\*7831 |\*7841 |\*7851  
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|\*7861 |\*7871 |\*7881 |\*7891 |\*7901 |\*7911  
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|\*7921 |\*7931 |\*7941 |\*7951 |\*7961 |\*7971  
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|\*7981 |\*7991 |\*8001 |\*8011 |\*8021 |\*8031  
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|\*8041 |\*8051 |\*8061 |\*8071 |\*8081 |\*8091  
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|\*8101 |\*8111 |\*8121 |\*8131 |\*8141 |\*8151  
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|\*8161 |\*8171 |\*8181 |\*8191 |\*8201 |\*8211  
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|\*8221 |\*8231 |\*8241 |\*8251 |\*8261 |\*8271  
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|\*8281 |\*8291 |\*8301 |\*8311 |\*8321 |\*8331  
TTTTGTGTTTTGGGACAATTACTTTAGAAAATAAGTAGGTCGTTTTAAAAACAAAATTA

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      |*8341      |*8351      |*8361      |*8371      |*8381      |*8391
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      |*8401      |*8411      |*8421      |*8431      |*8441      |*8451
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      |*8461      |*8471      |*8481      |*8491      |*8501      |*8511
AACCTGTCTGAATGTACCTGTATACGTTTCAAAAACACCCCCCCCCCACTGAATCCCTGT

      |*8521      |*8531      |*8541      |*8551      .      .      .      .
AACCTATTTATTATATAAAGAGTTTGCCTTATAAATTTacataaaaatgtccggttgtgt

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cttttgttgtaaaaatcaagtgtttttcataagggtcttttactattggaaaagatgg

      .      .      .      .      .      .      .      .      .      .
gcagcacgcagttttattttatttttgtaagttttttaatacatgtgaaagcaaagaata

      .      .      .      .      .      .      .      .      .      .
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gctgttagcattctcgataaatctctctgtgaaagtgactcaaggtctgggctttcatta

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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

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