

SUPPLEMENTARY FIGURE LEGENDS

Suppl Fig. 1: Sturgeon GRP cDNA and deduced amino acid sequence. Gray boxes indicate signal peptide. Black boxes indicate propeptide. White boxes indicate mature peptide. Black line above amino acids indicates putative γ -glutamyl carboxylase binding site and black stars indicate conserved amino acids known to be essential for γ -glutamyl carboxylase affinity. AXXF motif, conserved in other GRP and MGP is indicated in blue and RXXR furin proteolytic cleavage site is indicated in green. Gla residues are indicated in red. Polyadenylation signal is underlined. Black triangles indicate position and phase of intron insertion obtained from the analysis of the gene (accession number EU482149).

Suppl Fig. 2: GRP sequences cloned (C1-3) or reconstructed (R1-51).

Suppl Fig. 3: Taxonomy of species for which a GRP sequence was reconstructed or cloned. Taxonomic data were retrieved from the Integrated Taxonomic Information system at www.itis.gov.

Suppl Fig. 4: Alignment of GRP proteins identified. Alignment of 38 GRP1 proteins (32 complete and 6 partial but containing the mature protein) and 9 GRP2 proteins, showing conservation of residues at particular positions and highlighting functionally important domains and motifs. Residues are numbered according to the first residue of mature protein. Highly conserved residues in important motifs or in Gla domain are highlighted in gray. Arrows indicate cleavage position between the signal peptide and propeptide. RXXR, furin-like proteolytic cleavage site.

Suppl Fig. 5: Multiple sequence alignments created using M-Coffee and used to analyse the evolutionary relationship in Fig. 4.

Suppl Fig. 6: GRP1 conserved features. (A) Multiple sequence alignments created using M-Coffee and used to analyse the conserved features in B. (B) Sequence logos of GRP1 pre-propeptides showing the conservation of residues at particular positions and highlighting functionally important domains and motifs. Highly conserved residues are in black or red (Gla residues identified in suppl Fig. 1 or predicted). Black triangles indicate intron localization in the protein sequence. * Gla residue except in lamprey¹, Philippine tarsier² and spotted green pufferfish³.

Suppl Fig. 7: GRP1 gene organization. Schematic representation of GRP1 gene structure (limited to coding sequence) and corresponding protein regions. White boxes indicate coding exons (or part of coding exons 1 and 5). Phase of intron insertion is indicated in gray triangles. SP, signal peptide; PP, propeptide; MP, mature protein; GGCX, γ -carboxylase recognition site; AXXF and RXXR, according to suppl Fig. 1 legend. Table above the gene structure presents the mean values of exon size for each of the vertebrate taxa.

Suppl Fig. 8: GRP, MGP and OC gene expression in rat cartilage and bone. Sites of gene expression were determined by *in situ* hybridization of consecutive sections of vertebra (A) and femur (B). FC, fibrocartilage; IG, isogenous groups. Osteocytes are shown with black arrow heads, and osteoblasts with white arrows. HZ, TB, HC, according to legend of Fig. 5. Hybridization with GRP sense probe is presented in SP panel (x10). A1, A3, A4, B1, B3 (x10); A1', A2, A3', A4', B1', B2, B3' (x20).

Suppl Fig. 9: Structural organization of human VKD proteins at gene level (limited to coding sequence). Chromosome localization is indicated on the right side. Triangles indicate phase of intron insertion. GRP, Gla-rich protein; OC, osteocalcin; MGP, matrix Gla protein; FA7; coagulation factor 7; FA9, coagulation factor 9; FA10, coagulation factor 10; Gas6, growth arrest specific protein 6; PRGP1, 2, 3, 4 proline-rich Gla protein 1, 2, 3 and 4, respectively.

Suppl. Fig 1

1 **M N W N Q I I F I S L I A T**
 1 gtgagagctctgcacaaaATGAACTGGAATCAGATCATCTTCATCTCTTTGATTGCAACG
 15 **V L I L A I A N E A E S A A V R T D K S**
 61 GTTTAAATACTGGCAATTGCCAATGAAGCTGAAAGTGCAGCTGTCCGAACTGACAAGTCA
 35 **D I K R E D G E N M K K R I F M Q E S E**
 121 GACATTAAGAGAGAGGATGGGGAAAATATGAAGAAGAGGATTTTCATGCAGGAATCTGAA
 55 **A T A F L K R R G R R S T K S K D E V N**
 181 GCAACCGCTTTTTAAAACGACGTGGCAGGAGATCCACAAAGTCCAAGGATGAAGTGAAT
 75 **A E N R Q R L A A D E R R R E Y Y E E Q**
 241 GCTGAGAACAGGCAGAGACTAGCTGCGGACGAGCGCAGGAGGGAGTACTATGAAGAGCAG
 95 **R N E F E N Y V E E E R D E Q Q E R N R**
 301 AGAAAATGAATTTGAAAACATATGTAGAGGAGGAGCGTGACGAGCAGGAGAGAAAACCGT
 115 **E K T E Q W R E Y H Y D G L Y P S Y Q Y**
 361 GAGAAGACTGAACAGTGGCGTGAATACCACTACGACGGCCTCTACCCATCTTACCAGTAC
 135 **N R H H I *****
 421 AACCGCCACCACATTTAAaccctgcactgaacacaatcgcaaaaaaggacatcatgcca
 481 gagatctacatctcactaaaatgtgcggttacacatgtttataatatttaaacaattaa
 541 gcataccatattagctttaagaaggaagaaaaaaagtatatagcttttgatagtgatt
 601 gctttagctaataatagccatttcagccttcagaaacttgttttgcaaaaatggaactaga
 661 ctgatatacaaatattgtaaaatgttagatttaaaaggcaatgggtgtattaagggttttg
 721 tataaaggtaaaaatttaaggcacaagctctaaggaaacaaaaagtttatctagctgtgta
 781 aaataggttcaaggcagtttacgctagtggttgtaaaatggattcttttgaaatggagg
 841 actcaataaaaattatctaaagtgtaaagctgctgaaggtaccaagtcattgtcttgaaac
 901 tgataggcttattgttttttttaattaactttgaaaattgcattagatgcagtcattctt
 961 gtttgagacatctttgtgcttataacatattgtgatgtgaagacttattgtatacacagtc
 1021 tgtattgcaaacatgtacaataaataaatactctaccgc

C1 DlaGRP *Dicentrarchus labrax* from EU022753

1 M S W T R V
 1 gtgctgttaagtccagttgagttcttctctctctcaagATGTCCTGGACTCGAGTC
 7 **V V L S S L T T L L I L T F S S V V K S**
 61 GTTGTGCTCTCTTCGCTCACCACCCTCCTCATCCTCACCTTTTCCAGTGTGGTGAAAAGT
 27 **A A V R D D S K A G D P K G A A R H V F**
 121 GCAGCAGTCCGGGACGACTCTAAAGCAGGCGATCCTAAAGGGGACAGCACGGCATGTGTTCC
 47 **M P E S D A S N F F K H R S R R S P R Y**
 181 ATGCTGAGTCGGACGCCTCTAACTTCTTCAAGCACCGCAGTCGCCGCTCACCCAGATAT
 67 **Y S E R Q A E Q R V R L S A N E R R R E**
 241 TATTCTGAGCGCCAAGCCGAGCAGAGGGTAAGGCTTTCTGCAAACGAGCGGAGAAGGGAG
 87 **Y N E E Q R N E F E N Y V E E E R D E Q**
 301 TACAATGAGGAGCAAAGGAATGAGTTTGAGAACTACGTCGAGGAGGAGCGTGATGAGCAA
 107 **N E R S R E K N E Q V R E Y H Y D G L Y**
 361 AATGAGAGATCGAGGGAGAAGAATGAGCAGGTGCGGGAGTATCACTACGACGGCCTTTAT
 127 **P R Y H W F H *****
 421 CCTCGCTACCACTGGTTCCTACTGA gctgtggcatggagggccagactacagcacctctct
 481 tttttgagcagtgctcatactgttcaaaatgctaaagtatctccatattttccctac
 541 tttaatctccattataaagattttctttctttctttgtctattttatgaaacataaattg
 601 tgcaataagtgtaaagtgtatcaaaagtgcagcttttatattgtaagctacattttataa
 661 tattaattgaaggctatgtgttttgcagcttgttttactgcctttttttctttacat
 721 gtacatacaagctatacaatgtcctttatgttagcctgaggcattagcagaataaatca
 781 agctcttatgttaacaactgacttgttttgtcagagggggattgtaacttaatttgca
 841 aagaagtatttaagtcaaaataacaaataaagacaagttacctgataaaaaaaaaaaaa

C2 RnoGRP *Rattus norvegicus* from EU022754

1 M S W R Q V I L L
 1 tgccctgtggtttctggaagtgcactgtaaagATGTCCTGGAGACAAGTCATCCTCCTCG
 10 **S S L S A L V L L C M L Q E G T S A S V**
 61 TCATCTCTCTCGGCCCTGGTGCTCCTGTGTATGCTACAAGAGGGGACCAGCGCTTCTGTG
 30 **G S R Q A A G E E V Q E G M K Q K I F M**
 121 GGCAGCAGACAGGCGGCTGGAGAGGAGGTGCAGGAAGGTATGAAACAGAAGATTTTCATG
 50 **Q E S D A S N F L K R R G K R S P K S R**
 181 CAAGAATCCGATGCCTCGAATTTCTCAAGAGGCGTGGCAAGCGGTCTCCCAAGTCCCGA
 70 **D E V T A E N R Q K L R D D E L R R E Y**
 241 GATGAAGTCACTGCGGAAAACAGACAGAAGCTTCGGGACGATGAGCTTCGGAGGGAGTAT
 90 **Y E E Q R N E F E N F V E E Q R D E Q E**
 301 TATGAGGAACAAAAGAACGAGTTCGAGAACTTCGTGGAGGAACAGAGAGATGAGCAGGAA
 110 **E R T R E A V E Q W R Q W H Y D G L Y P**
 361 GAAAGGACCAGGGAGGCGGTGGAGCAATGGCGGCAGTGGCACTATGATGGCCTGTATCCT
 130 **S Y L Y N R Q N I *****
 421 TCCTACCTCTACAACCGCCAAAACATATGA cctcaccctcaagcaactggggaagagaag
 481 catagacacgcctcccgcctctctgagacagaccataaggtgaagctccctcgaggcc
 541 ctggccaccagttgcaggaaacacacctttgttttgatgccttttgaggcctggttttcc
 601 cttctttccgatgtttgcttctgtctgttttgagtgagcgaccgctgtggttcttcc
 661 cagcgtcagatctacaccttgcccgttgccttagccaccagaacagagttagaatgcc
 721 gtctgatgggacacttgaggatcaagcataaagattttaagcttgcctgtggcctatt
 781 aataaaagtgcctgactcg

C3 SauGRP *Sparus aurata* from EU022752

1 cttcggttaggtttgctgtcaggtccagtagggttctcgcgctcgtctctctctgtcaag
 1 **M S W T R V V V L S L L T T L L F L T F**
 61 ATGTCCTGGACTCGAGTTGTCGTGCTCTCTTTGCTCACCACCCTCCTCTTCTCACCTTT
 21 **S S V V D S A A V R D D S K A G H P K G**
 121 TCCAGTGTGGTGGACAGTGCAGCAGTCCGGGACGACTCGAAAGCAGGCCATCCTAAAGGG
 41 **P A R Q V F V P E S E A S N F F K R R S**

181 CCAGCGCGGCAAGTGTTCGTGCCCGAGTCGGAAGCGTCCAACCTTCTTCAAACGCCGCGAGT
61 R R S P R S Y A E L Q A E Q R V K I A A
241 CGCCGCTCACCCCGATCCTATGCTGAGCTCCAAGCTGAGCAGCGGGTGAAGATTGCTGCA
81 N E R W R E Y N E E Q R N E H E N Y A E
301 AACGAGCGGTGGAGGGAATACAATGAGGAGCAGAGGAATGAGCATGAGAACTACGCAGAG
101 E A R D E S D E R S R E T H E Q I R E Y
361 GAGGCACGCGATGAGTCAGATGAGAGATCAAGGGAGACGCACGAGCAGATACGGGAGTAT
121 H Y D G L Y P R Y H W F H ***
421 CACTACGATGGTCTCTATCCTCGCTACCCTGGTTCCTACTGAgcgtactgtgtcgcgtgg
481 agggccgggctacagcgcctctcttcgagcatcacctttacccccgtacaaatgtagat
541 tccgtacaccttgagagcaagtgtctagagttatctcgttggttttacagtactttaatcta
601 caagatacaggttatcgctttcttttctattataaaaccttaatggtacaacatgtgtct
661 ccacgtcaaaactgtaaaatgtattaaaagtgcagtatgttattgtaagccaactttatc
721 atataaaatggaggcatacattttacatggttggctaaaccgccttttctgcatgtaca
781 tacacgctatacagatgtcagcctgaggcattctctcaacagctctgaaacgtatttgatgt
841 ccgaggtcgaaataacaaataaagaggtgtctgacttcacaaaacaaaaaaaaaaaaa

R1 AmeGRP *Ambystoma mexicanum* from EST CN035351

1 R I R H E A S F F R K R G K R S P K A Q
1 AGGATTCGGCACGAGGCCAGCTTCTCAGGAAACCGCGCAAGAGGTCCCCCAAAGCCCAG
21 G E I N A E N R Q R L S A D E Q R R E Y
61 GCGGAGATCAATGCGGAGAACC GGCAGAGGCTGTCAGCCGACGAACAAAGGAGGGAGTAT
41 H E E Q R N E F E N Y V E E E Q D E Q Q
121 CATGAGGAACAGAGGAACGAATTTGAAAACCTATGTAGAAGAAGAGCAGGACGAACAGCAA
61 E R T R E Q V E Q W R Q W H Y D G L Y P
181 GAGAGGACTCGTGAGCAAGTGGAGCAATGGCGCCAGTGGCATTATGACGGGCTCTATCCA
81 S Y H Y Q R H N I ***
241 TCTTACCACTATCAGCGCCACAACATCTAAaggcagcgggaagccggagcagccagccttca
301 ccgactggcctccgcttgtgtgcaatgtcagcgtgtgcaaaaagttgccttttgaaaaac
361 aaaaaatgtgcagatcgcatctggctcattgcggtctctttcttgcggtttttgacctt
421 ttgcaacttgggtgcataggacatgcgtcttgaggttga

R2 AcaGRP *Anolis carolinensis* from WGS AAWZ01021416

1 L E K R V F I Q E S D A S N F F K K
1 cagGTCTGGAAAAGAGAGTCTTCATTCAAGAATCAGATGCCTCTAACTTTTTCAAGAAGC
21 R G K R S T K S R D E L N
61 GAGGCAAAAAGATCGACTAAATCTAGAGACGAACTTAATGgtgagattgtttggaggctgt
121 ttatgtgaaggctctgattctctgaataccctttcatctcttttttttaggacattcctt
181 atttgtctattctggagcaacaagtaacttgagattcaaaataaactcattatttgttcc
241 cttttgagattagtgaaacatacatatacattgattgcaactgatttattcaaggaaacaa
301 gaaataagtagccaaattttgcttttttttgctgaaggataggaaaaactcaaaggaaaa
361 actgtagaacataaaataggcagaaaaaggaagaaataaatgttgtctgtttaaatta
421 accaatacagtagagtctcacttatccaacgttctggattatccaacgcatttttctagt
481 caatgttttcaatataatcatgatattttgttgctaaattcgtaaatacagtaattaccac
541 atagcgtgaatgtgtaataactacttttctgtcaaatgggtgtataacatgatgttt
601 tgggtgcttaatttgtaaaatcataatctattttgctgtttaaaggctttttcttaactt
661 ctcttattatccaacatattcgcttatccaacattctgccagcccgtttatggttgata
721 agtgagactctactgtatctggaaaattccttggaggtagaactttcatttaatttctta
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841 tagaaaaatagttaaataaatatgttttaaggaggagggtgtagttcttaactgctta
901 agctaaggattggttagtgaaatgaataggaagctgttggggaggtagcaggaacaatg
961 gtgaaattaataatagtggttggcaataatagggaactatacgtttgttttaagcctaagcagt
1021 tttcttaaaataagatttagagaaaaagagattgaattttatttaagaacaacacaaaaa
1081 ttttttttatttctctgatgtctacatgtccagtttttttaagccttaattaagaac
1141 caactgtgcttttttgtattgctgtttaggacacatgatacagcgtaacagaattggttc
1201 aaattaaaaaagatgagaaagattcggttcacaagtaagaccattgtaatggaaatctcca
1261 ataataaaaagaggtggagattatcatggtatatgcacacggttaatggttttagtatttca
1321 ttattggggatgattaataaaggaacaatagggtccagtggttcttagggtttacttactg

1381 tatgtgtcttatacacctctatcatttgctctttgggtgtttcagcaagaaataccgtaaa
1441 ataatgctgattccttaggtttaaccccatgataagcataacctcaaggccatctgaact
1501 gtagcatgccagttgtgggaccctctttatagagaacccttactggtgccaacattgatc
1561 tcattccgatgccaagtgaaaacatggcattttgctaaagccttggggaccatttttcag
1621 ctgagtttacacataatcctacatacattgccttaaactatgttgtttttcatttgctat
1681 gtcatttaataagccttttagtctgtttaacttattctccctgcattttattgtttacact
1741 ggttatattgtagagtgtccctcgctacttcgtggtttgcttttcacggatttgctgtt
1801 ttgCGGTTTTTaaataaaactaaaataatagtataaatcataaattaatattataaata
1861 cctctttctgcttccttcctaaggagaagcctaaggaaggaaggaggaggagaagccgaagg
1921 gagagaaaaggagactgaagcagctttgctttcgctcaaaaggcagcggcagacagaga
1981 cgctacttgtcagtgagattgtaaaacacacaaatatagcgtccctatttcgCGGATTT
2041 aagTTTTTgcacatggtcttttctcctctccttggaggccatcatccactccacagcc
2101 aagccaaaaccagtcagtgagtgaaaccaatgcctaatttattacttctgtgttgtgtggt
2161 ttccaggatgtatgatcgtgttttagcatcattttctcctgatgtttgtctgcatctgt
2221 ggctagcatatgatacagtttattttgcttttcaatggcaaggacctgatctacacat
2281 gaaaaaagcactggtgaagcttgcactactaatctgtcccacccccattcatactca
2341 tctgtgtgttctgaagcactggaagagagatgggaatgatttttttctgctgtacac
2401 atccccatgagccaacttgggttttctgaaacttcattttgatgtgctttggatactag
2461 caagcaaccgaaggaccaatgttctgggatcttgcctggagggaaccagtcacatacta
2521 aacccttttcagattaattccaaaaatgcagaaggtagtataactaaaagtgggtatctga
2581 aaatcacagctcaggtaaactcctgatggtggaaaaaagtaaggcacactgttctctacaa
2641 aggaggccaaaataatagatcataaatgtagattgttgaggacatatttaaggaacat
2701 tactataattacacagatttctattaatccatttttagttggattgagttgaaaaaact
2761 aggattaatccagtaattggaagatacagggggcccttggaaactgttagggcttggttc
2821 cagggcctataaaaaggtaaaggtaatggtttccctttgacattaagtctagtcatgtctg
2881 actcttgagtgttgggtgctcatctcaatttctaagccaaagaaccggcattgtccataga
2941 cacctccaggatgtggtcggcatgactgcatggagcaccgttactttgcccgggagcca
3001 tacctatcgatcttctcacatttgcaagttttcgaactgttacgttggcagaagctgggg
3061 ctaacagcaggagcttaccocgctcactgaattggaactgaggacctttcagtcagcagg
3121 ttcagcagctctgtggtttaatccactgtgccaccagtggtccttttgaaactggtggc
3181 ttagacaaaagatggtcaatttgttgcctccatagttgttggggctgcagctccctagc
3241 cagcacaaccaatggttgaattatgcctggcaaagctaccagtagagccacgtacaggat
3301 gacctgagtgaagctttagtattcaagttgttgcagttttgaaactgttaggttggcag
3361 aagctggggttaacaatgggagcttacctcatccacagattcaaaccaccaaccttccga
3421 ttagcaagttctacagcttagtggtttaaccgctgcatcaccacggcctcattccaggg
3481 cctttgggtggatgccaatggttggattacacacaatggcatggcataattgtgtctttt
3541 atataaaatggcaacattaaggttggatttttttgggtaataatttcaaattgtgattgt
3601 ttgaatttatgcatgcaaaatttgtgaacatggaagactggcggatttggctaattgttat
3661 tttctacttggacaaaacacactttggagattgcacctagcctgtgggctgggactaaat
3721 tcttggtaaagctacaattgatgtctcctagaggcttatgcaaaagtcaacacaggctgt
3781 aaaagatgaatattcaagttacttgttgcctcagaatattcaagcaataagtacaagaa
3841 ataagtgaaataaaaattacactaatccttacttctcctttgctttctttaaaggccagctg
34 A E T R Q M L A A D E
3901 tctaactctgtgtacatattccttatgcaGAGAGACACGGCAGATGCTGGCAGADATGA
44 Q R R E Y Y E E Q R N E F E N F V E E E
3961 **ACAAAGGAGGGAGTACTATGAGGAGCAGAGGAATGAATTTGAGAACTTTGTGAGGAAGA**
64 R D
4021 **ACGTGATG**gtaagagtacagcaaggattgggaactttattttggaaaaccggaatgcaaa
4081 atcattctatcctgacacagctgcatgctgtggaaatgcttgtgtatctggtaaagaatt
4141 gcagatcttagggcttggcttctcattcgctggatcttcaggggcaggggaggaatctca
4201 gatgagagtgtgccttgaaaaaaaaaatgcacttacacaaatatacttcagttaatgaagt
4261 agctatgctcctatgtattaataacatggagctggtaagaaatcatcttctgaggtcatg
4321 attcacatagaaacaggagaaaaatgggggaaacacatgagattaatctgtaataataat
4381 aaataataaaactttatttatatattgcctatctcctcaggggagataaaaaacaataca
4441 atacaatacacataataaaaaacagaaccatacaacaatttaaaaaataatacaagtaatat
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4561 ataaaactagtaacaataactccatttacaggccagttatagtacacagagttcaacatt
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4681 ggtggataaaagtggtgagctgggttaaaaggagggttaaggattaatcttgcctcaaaga
4741 tctgcaggaaccaacaagtttttaattccttgtctgatctctctgggaaggcgcttccag
4801 agccacggagccaccacctagaaggccctctccctcatcccaacaaccgtgcttgtgac

4861 agtggtgagagcgagaggaggcctccccggatctgtcaagtttgactgtgtggaattgc
4921 ttcagtgacatggagtaatgtgcatcctatgggtggttaccaacggaacattgacaatt
4981 atcccccaaaatcctgtttcatgagcctggcatggtaattttattaatttgatcattagg
5041 aataaccgcaatttcactttgttttctctcatttctccttcacaataatcttggtttc
5101 taaattgcgctactcctagctttttaatctctctccccccccccccctttaactaact
5161 atagtaagttcaagtgcctagtaggtttcagggcacttccagacaggcatttatcctggg
5221 aacattttcttcttcttcttactcgttcagtcattttcgactcttcgtgactgcat
5281 ggaccagtccacgccagagctccctgtcggcggctcgtgcccgcagctccttcaaggctg
5341 agccagtcacttcaaggataccgtccattcatcttgccttggcggcctctcttcttt
5401 ttcttccagtttcccagcatcatgatcttctccaagcttctcctgataatgt
5461 ggccaaaatacttcagcttgcctctagatccttccctccagtgagcagctgagaggat
5521 ggactgggtggatctctttgaggtccaaggcactctcagaatttccccagcaccaaaag
5581 ttcaaaagcatctatcttctcgtcagccttcttcatgggtccagctctcgcagccata
5641 tgttactatggggaataaccattgctttcactatgcgacctttgttgccagtggtgtaaaa
5701 aacacaaatgttctcgggtgcctgtccacccccccccccccagaaagcccgtgctttct
5761 ggggtggatgggcagatgttctcccggaaacattccggggagaacacccggatcctgtacc
5821 cctccccaaagcccccaaaagcccttttaaaataaaaaaaaaaacttaccggggctcca
5881 ttacagtggtcctgcaactctcctggcacgtagcaatgacatgccaggaggggggggagc
5941 aattttcttactctcccccccccccccaagtctcctggagcatcattactacgagtc
6001 aggaaagctgcaggaacactataatggaggccaggttaagtttctttttacttttaaaag
6061 ggggttggggggcttttgggaaggggtagatgtcctcacggtttctgggctaatttag
6121 ggcagtcacagacagcagaagttaggaaggtgcagaataaacctactattaatccac
6181 cccaaaccagggtatttctggatgtgtcaattaattcgtgttttccaaaagtgtcgtct
6241 ggacagcccttttttgtgtggacttcccgcattaaaggggctgtctgtatgggtcct
6301 cagacttccatgattgagaataagcagatttggaaaggaaagaaaaagaaaaacctaga
6361 aaaggagtgttgtgttaaaaacgatgccttctgttttctctatgggtgactgagctaga
6421 ggtgggagaggtgatcctgtgtgataggggtaagtaaatctccttcttaagat
6481 ggaatcccacacaaaagatgattttacagcgaagatgatttccccactttcctccaacc
6541 ctgtcttataaaatccttatgtaaatgccagtagattatgctttagcctaaaacgagttg
6601 aggttaaagaaaagggatttgcctgaatgaaagcaatgctgagaaaggcatcttttatttgc
6661 tttcaggctatgactgtaagcatctcggtttcatgacactgaatctgtagtttggaaaca
6721 attgttcttaaaaatgtgtttcacctaataccgctgcaactcacacaaaagttccttct
6781 tgtctccagttaccaagtgtttggatttctgttagaacagttcataaatacacaacagtg
6841 cttgaatttcaaatagaactttgaaagtgtttgaaaaacagagggagggaggtgataa
6901 tgaactctagcaacatctacaaatacagtaagggcatttcttttctgaaagatgggtt
6961 cgggtcccagtatcctcatgaatgtttgacatttggatgacatttctgtcactgtcacc
7021 tgattgtagtttctaagcattcaaggaatgctccagccagactggagcttatcttgggtca
7081 atcttaggttaccatcgtttccctgtaacaaagaaactacagtcgctcaaattttttgag
7141 tttaatcttttgtcactgctgctgccctcaatttataatagggactttgataacatgggt
7201 gtttgttttgattagttaggtcagggttagtcagtgatcgaatctctggccactgggagg
7261 aaatcgctttgggtgcagtggtggcctggctgcataatgatttcttctgtgaaattgctt
7321 gcttgggaggggttaatgggaatgcgacacaggaagcacaaggaggaatggcaggtgatgt
7381 gttggtctgtggaaagaacaaaaagagtggaacatcgggagttaggaagagagaggtga
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67 E Q D E R S R E Q I E Q W R E Y H Y
 9601 tttacagAGCAGGATGAAAGAAGCCGAGAACAGATCGAGCAATGGCGTGAATACCACTAC
84 D G L D P P Y L Y N R H V V ***
 9661 GATGGCCTTGATCCTCCCTATCTGTATAATCGGCATGTTGTCTAG

R3 BtaGRP *Bos taurus* from Chromosome 13 and EST DN288716 & DN287527

1 cagcagcctcagggtctgtagaatcctctcttttgggtccccagacagagcctcagcctttc
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20 M L
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21 W E G A A V S V G P R Q V A G Q E A Q E
 421 GTGGGAGGGGGCTGCTGTGTCTGAGTGGGCCCCGAGGCAGGTAGCAGGACAAGAGGCACAGGA
 481 AGgtgagtaccggggccacccaaggctgcaggggtggatgggttggctcctgacatagcct
42 D V E E I
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46 F M Q E S D A L N F L K K H S K R S P R
 601 TTTTCATGCAGGAATCAGATGCCTTGAATTTCTCAAGAAGCACAGCAAGCGGTCCCCCAG
66 F Q D E V N
 661 ATTCCAGGACGAGGTCAATGgtaagacactgtggcctgccttctgctcttgccttctc
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3241 tcctcagTGGAGAACAGGCAGAAGCTGTGGGCAGACGAGCTGCGGAGAGAGTATCATGA
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3301 AGAACAAAGGAACGAGTTTGAGAACTTCGTGGAGGAGCAAAACGACGGtaagagctcatc
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6841 tgtccccagAACAGGGAGAGAGAAGCCGGGAGGCTGTGAGCAGTGGCGCCAGTGGCATT
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R4

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 3361 AGCAGTGGCGCCAGTGGCACTATGATGGCCTGTACCCATCCTATCTCTACAGCCGCCACC
95 H I *
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R5 *CfaGRP Canis familiaris* from Chromosome 2 and EST CO598559, CX988923, CO603456

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107 **E Q E E R S R E A**
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116 **I E Q W R Q W H Y D G L Y P S Y L Y N R**
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136 **H H I *****
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R6**CpoGRP** *Cavia porcellus* from WGS AAKN01628792

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83 **D E L R R E Y Y E E Q R N E F E N F V E**
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103 **E Q K D**
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 7321 tttgggtggtttctacctcttggctcctgggagctgtgctcctatgaggaactgctgggga
 7381 ctctctcagagtccctgctttcagtccttttgggtattttcttggaaacaaattgctgg
 7441 gtaaaatgcggccacttcatgcttaatgggtggaggagcctcaggaatgcttctcaata
 7501 tcagaagttcctgatgtctactgatgcttctggctcttctgataccatgggcacgcgg
 7561 gattctgtcctctcagggctgggtggctccctcaggccagagaccttctgtcctcacgg
107 **E Q E E R D R E A V E Q W**
 7621 tgacttgcctttccaccagAGCAGGAAGAGAGGGACC GGGAGGCCGTGGAGCAGTGGA
120 **R Q W H Y D G L F P S Y L Y N R H H I *****
 7681 GACAGTGGCACTATGACGGGCTGTTCCTTCTCTACAACCGGCACCACATCTGA

R7 ChoGRP *Choloepus hoffmanni* from WGS gnl_ti_1363001332, gnl_ti_1334140103, gnl_ti_1315443847, gnl_ti_1362987473, gnl_ti_1357157568, gnl_ti_1310205087, gnl_ti_1318632591, gnl_ti_1327586115, gnl_ti_1357418362, gnl_ti_1359047552

1 **E D R Q K L W V D E**
 1 ggcaactcttgctctttccccctttacagCGGAGGACAGGCAGAAGCTGTGGGTGGATGAG
11 **L R R E Y Y E E Q R N E S E N F A E E Q**
 61 CTACGGAGAGAGTACTACGAGGAACAAAGGAACGAGTCTGAGAACTTTGCGGAGGAGCAA
31 **N D**
 121 AACGATGgtaagggccagtcagcctcttcagggaaaggggatttggggaaagctcatg
 181 ggatttgcctccatttctcccagattgtaattgggggtgggcagaaagggacgatcaggtt
 241 tcaagtcatatccatggaatctcaagaaagaataaaaaaatatggcagaaatagccattt
 301 gtagaaggtaaaagaacaagataacctgtctgccattggcttgggtctgccatttggggg
 361 ctgtatggatagaaaactcacttaccgcttccctcctatgtggagacctcgtggggacctg
 421 tgttgtgtttcagcccctaccctagtggcttagctgtggtggcatttgggtgggaggagt
 481 tcaacgcaccttgaagttccttggattcacttagtgtgacagctataagaagcaattcgt
 541 cctgtaaaagtcatggcttgggttactatattcactgcttctagtgtgctaatgctgctgga
 601 atgcaaacaccagaaatggatcggcttttataaaatgggggttatttgggtacaaaggtac
 661 actcttaagtaataaagtgccaagtcagtcacatacaaatgggtacctcactcaggtatg
 721 gtcaatgtgactgtaaaacttttactgggaaggaccgtgctgccatctgcnnnnnnnn
 781 nn
 841 nn
 901 nn
 961 aaagaacttcaccgtggcgtgctcacaagcatcttctctgagccgagcctctgatctat
 1021 tgggacctgattttctgccatcttgacctgacaacatcacctattctaagaataacagag
 1081 tttgggtgctctatctcatgccaaagataacctgctccataaaagggtgctcagggttact
 1141 gtgggtgaaatctcaagagttggattcccaaggaagaatttgaggcaggggggtcaagaaga
 1201 gccatttctggaccaggggtggccttctgagggcctgcaaatcccacctcaaaggcccat
 1261 gcatgggacctcaaaattaccagctgcatgaggcaaatgcctttgatgctgcctcagaag
 1321 gtccctgggacagtttgtcaagccccactttccaggcctgtggggtggctcaggctgctt
 1381 ccacctcagtgcccctgggtcaggtccaaggctggctgctggaagcctggcttggcagg
 1441 acttcccttgccacaaggagccccctaaagaaacccccactgtttgggtctgcggtaaaat
 1501 cagggacgtctcttctcccaagtgaacgggtgaagaagaggttggcatgacctggggag
 1561 gaaaaatcaagttccatgtgaaaatcatgctcttaaaatgggcaagagtaactggctac
 1621 caggtatgagaatggtctacaagggtgaaggctaacacccaaaactcgaacttggcct
 1681 ggctttgggagcaacaggctatcactgggctacctacggggattttcagcaccagggata
 1741 gtgccaaacttcaaggtaccctgggaaggggacattcccaccagcaggagcaagggggc

1801 cttcctgtccaagtgagctcttgccaagcatcacaggtgctaaggtccataggggcatcc
 1861 attttctctagaactagcagccaccaggctgccctgttgccaatgaaggtgccagttt
 1921 cactagcaccaaaatcagattcactgactttttgctgaagtctgcatttgggaaacaat
 1981 gacaaggaagagagagtttgggttttcaaaccttgacattatctttgtctgttaggactttc
 2041 catcccccaacattttccgcaaatgccttttaaacatcgaaggccttttcatgttgact
 2101 tgtggtttgatgacacctaaagagtaacagctctccatttgcaccagagacctagggctac
 2161 ccttgacaaaaagcattccttggagacagctcttgtaaaagacagtaaaacggggaactt
 2221 cttagtctgttaaaacctttcttctgttctttttagactcttaccatggaaaatttcaaac
 2281 atatggagaagtgtatagtataacaaaccccatgtaaccatcaccagagtcaaccatta
 2341 ccaaggttgcttctaccatccctttttccagtaattttcaaaatgtaatttggttttg
 2401 aagtttagaaagtatatgtcaacaatgcagaaaaactgatccagatccccccctccaag
 2461 tcaacaagtgtgtatctcctccagctcatagtgtctttattgatcagccattgtatctt
 2521 tcagccagtgaccgcacaaggctctcctccccttgctggttggcaggaagaaggccgag
 2581 ccgaaaagcagctctggtcccagctcccttggcccagctgtgacctctccatacaag
 2641 acttttggaaaccaatgctctctggggtcccttaaagcactgaccgctgtggtcactcta
 2701 gggctctgaggtcacagtgaccacaagcgcaccaagttagggcaccaccgggtagggggtt
 2761 ggggttggtggctgctgggcttgtgtgtctctcctcagactggagcccacccatctaa
33 E Q A E R S R E A T E
 2821 cgtcccagctccatcttctctccccag**AGCAGGCAGAGCGAAGCCGGGAGGCAACGGAGC**
44 Q W R Q W H H D G L Y P S Y L Y N R H R
 2881 **AGTGGCGGCAGTGGCATCATGACGGCCTGTACCCATCTTACCTCTACAACCGCCACCGCA**
64 I ***
 2941 **TCTGA**

R8 CcaGRP *Cyprinus carpio* from EST CA967845

1 **M A R**
 1 ctctctgctgtgattctgataacctgcataagacataactcatcttctgaagg**ATGGCCAGG**
4 T H T V L L T L L P T V L I L I V L A G
 61 **ACTCATACTGTGCTACTCACACTGCTGCCACCGTCCTCATTCTAATTGTTCTGGCTGGG**
24 V E S A A V K A G K D T E A Q P G A S K
 121 **GTTGAAAGTGCAGCTGTTAAAGCTGGAAAAGACACTGAAGCTCAACCAGGAGCATCTAAA**
44 R V F M P A S D A S N F F
 181 **CGAGTTTTTCATGCCAGCATCTGATGCCTCAAACCTTCTTCA**

R9 DreGRP1 *Danio rerio* from WGS Zv6_NA1022 and EST CA495833, CA475209, CD754144, CK144098, CK143397, CK139571, CD279172, CB364562, EB864192, CD279170, EB870705, EL646448, EB847532, EB842819

1 acttgggtcaaattccattcactgctctctcaaccacaagcctcacaacatcagcagcctt
1 M S W T Q P A L L T
 61 ttcttcaactcctgctccgctaaatctaaac**ATGTCCTGGACTCAACCTGCTCTTCTACC**
11 C L L V L S A I T
 121 **TGTCTGCTTGTGTTTTGTCCGCATCACCT**gtgagtagccggactgtggtaaaaaacttgtca
20 L F D G A D
 181 aaacttghttgggacttacctcatccatttctcctgtgttgag**TATTCGATGGAGCCGAC**
26 S A V S D K R D A V N P Q
 241 **AGTGTCTGATCTGATAAGAGGGATGCAGTCAATCCTCAAG**gtgacttaagaagttaatg
39 G
 301 ctaaaagctgtaggtgtttctcagagttcttcatcagtggttgttcttctgataaag**GTG**
40 A L R K I F M P E A D A A S F F K R R S
 361 **CACTGAGGAAGATCTTCATGCCAGAAGCAGACGCCAGCTTCTTCAAACGGAGAAGCA**
60 R R A V K T Q D E I N
 421 **GGAGAGCTGTGAAAACCTCAAGATGAGATAAACG**gtaagggatatttgtgcttgtttgagaa
 481 ccgttttaaacctgcatgcaaatgtgaatgttttaaaagcagacgccatttgtatctt
 541 cagatttgttcataataataatcgttagtgaaaatacttttaatttaattcaacctttta
 601 cttgattacttttatgttacacatatagtttttaatatgtatagctgtattattatttga
 661 ttattacattatttattataagatttagcattgctgttgttagtattattacagttgaag
 721 tcagaattattagccccctgaattattaacccccctgtttatTTTTTTTcccccaatttct
 781 gtttaatggaaagacgatttcttcaacaagtttctaacaataataatttttaataactcat

841 ttctaataactgatttattttatctttgccatgatatTTTTTgatatTTTcaagacactt
901 ctatacagcttaaagtacctttaaggcttaactagggttaattaaggttaactaggcagg
961 ttagggtaataaaggcaagtattgtataacgatggtttgttctgtagactatcgaaaaa
1021 atatagcttaaaggggctaataattttgtccttaaaatgggtgttaaaaaattaaaaact
1081 gcttttattctagccgaaataaaacaaataagactttctccagaagaaaaatattatca
1141 gacataatgtgaaaatttccttgccttatttaaacatcatttgagaattatTTTTaaaaaa
1201 ttaattcaaaggggaggtaataattctgacttcaactgtatTTTaatattcatttcatta
1261 gaactctccagctaaaagactctcatttatataaaaagattagtaactaataactgtataa
1321 aatatagatcaagttaaaggataatgggaagtagaactaaataccataaattgaggatgag
1381 gtctgagttatgtgaaggatgtcattaaagaatcaatagtcaactatggaagaaaaatg
1441 aggtacactTTTaaaaccaagttaagtcaactcgaaccatttgaggaaaccgatagcaaca
1501 aaccatttaagttcgaaaactaatcctaagtactgtgaacttactccatttgagtaa
1561 acgaagcaatttgagcacagtaaaacccaataaatgaacagaactcaatccaactgagtc
1621 ctgtaaaacccagtaagttaaggcaactcaaccattgaggaaaccgattgctacaaatc
1681 atttaagtaaaaaactaatctaagagtactgtgaacttcatthaggtgaagtaatgtgt
1741 tatttaattaacactgagttcaaaactcttttcaataagtagatttaactTTTtagtcaa
1801 ttttgagtactacttcaactcatttcatttgataaagtcgactgttgggtTTTtagtcta
1861 ctttaataactcctgtaattttctacaaatgtaaaaggaccatctgttgcTTTgtgtggag
1921 aaaatgtggtaaaactggagatcacactgcatatttgggactTTTgggatttaagatttt
1981 ggaaaaaatgtccaaaagaaatgcatggtcgaaagttctccatagggtggcttaaacagg
2041 tctatgtaatggaaaaaatgactgaatgtctacaaatgaagactgaattTTTTctgaaga
2101 ggtggaaaagtattacagcatatttagatatgtatTTTtagaggttacttacactctcac
2161 caatggaatctgaggcaaatacaaagtaacacaatgtaattgatgtacaaatgatccc
2221 ctgaaaagtaactatgatggcagtacatttttatttattttgtatagTTTTatagcttt
2281 atttgtTTTaaaagTTTTatattgttattatttattttttgtatTTTTatgtatttttt
2341 tatgtattaaaggggttacattTTTTggggaaggggtgttctaaaacatctaaaaaaag
2401 aatttaattagaattctattttccaataaaaagttctgtTTTTaacatttataataatta
2461 ttaataaaaaataataatagatatTTTaaatgtcatatctgcataaattctgtgacca
2521 tgacactaaaaactgttatattcactggtgaaattgagatttgccattaattatttaa
2581 atcataataaataaattacaaacattttcatattgttaatttaaatgcaaaggatacatt
2641 taaaacaatattttctcacttttcttttgaactaataaatgcagctttggagagtattt
2701 ttttcctaataatattttacaatcattttattaatgctTTTTtataatgtaaagaaattct
2761 tactaatcgcacatttttgaacagtagtgtaaaataatTTTaaaaagccataatataaca
2821 ttttgcaaagtaaatcagccactactcacatcatcagatttgcggttgtgtgggtTTTcg
2881 gtcagacttacagtaacctggtgtaaaataaagaggctatttagcggccacacaggttaag
2941 ccagctgaggaatgtaggaaccacaggacagcctggagaaagcagactccagctcccgg
3001 tgctggaggagcagctctgttttacatgtctttgatTTTggctttggcctgggttgagat
3061 tgttagtttatggttgtggacacacaaaattggtgtttgactcatctgtgggagttaat
3121 gtttacaaaacggtgacgcaaggaaaatgactacattTTTTTTTTgaagcgttcattca
3181 tactTTTTctgaaataagtaagaatttaacatttaattaatgctacagtagcaacatgct
3241 gatgctgatttagtaatgcactaaacatgctggcaacatgctatttcatgctagtaatggt
3301 caaaagatgctaatttccacatgaaaaaagtattgactgaaatatttctgaaacagatgt
3361 tttttaagctgcatTTTgtgacactatgatcaatttcttttacagcacattcataactga
3421 aataggaaaaggcaaaaacagagactttgtagatggagttaaaaaatcatattgaatgct
3481 atgtatttccatcttgcctgaccagttatttgaacattgtagtttgccaacttgtttat
3541 acaaatttaccaaaattataagcgttaaatcatgaaaaccctatatatagggttttcca
3601 gtcgagcagctgcagaacgacggctaagctctcgaggatcttgtttaccatacattggga
3661 cacctatggtgacttgggaacgacctggttgtacaacagctcttgcctgcaggagagttt
3721 aagaggagagacaaaatgccctgtgacagcgcgcaaaggcatagtagatcccagccaatgta
3781 gcacaaatgatggcaatgagtacactgcttctgcctttgtagagaaccctggatttctt
3841 atgcttatgaagcatgtagaacctgatttgaactgccatctcgccactatttcacagag
3901 aaagctctgccagccctttataagaagatttctgacaaactcctattcccgttatcagat
3961 gtaacccatgtttattcaccacagacatatggagtcacccctagctcccagctctcta
4021 ctaattcgggtcggtacgggtcaccttatcaggcttgcatTTTccaataccaaggtacc
4081 cttatggtgggctggtgtttgacaaagttcagttgcattattctcgcttgaggaaatg
4141 tctacaataaagctgtatgggttgcctacatatcatatgannnnnnnnnnnnnnccata
4201 cacacacattcacacacacactcatacactaaagtcaagtttagcataccaattcacct
4261 gaaacacatgtctttggacttgtggggaaaaccggagcaccaggaggaaaccacgag
4321 cacagggagaaacgcaaaactccacacagaaatgccaactgactcagccaaggctagaac
4381 caccgatcttcttgagtgaggcaactgctaccactgcattaccctgtacgctTTTT
4441 gagatcctcgagagcttagccgtcgttctgcagcgtcgcgactgggaaaaccctatatat

4501 atataataaaccacgtcaattacgtcaattaatnttttacattgtcctaacaacattag
 4561 ttttcttaaaacttgtaggaacatgtgaaaaacatgcttttcctgctgaaaaactgct
 4621 tcaaccagcctaggctggttgactggtggaccagcctggttttagagcagtttgaccac
 4681 tttcaggctggttaccagccattttcagcctggttttagttggttaggctgggagatgac
 4741 caactaaaaccagcttgaccagcctaagagcccagcaaaaccagcaatgtctggcttaa
 4801 ccagactggtcaagctggttctagcagggcatttttcagcctaagcagctaaggccaggc
 4861 tggaaatggccaaaccctcaaaaaccaggctggtcaaccagctaaaaccaccaaccag
 4921 cttaaagtttatttaagctgttttttttcagctggaattttaagctagtcttctctttaa
 4981 atatgcagcatgctaatttatgttcacatgaactaacgatgcaacaaacatgtttatgca
 5041 agcaatgctaaggtagtctaagttctacattagcatcataaaatttgctagtaacaaca
 5101 catgctaaaccaacaaaaataaacatgctataaatatgcaatttttatgccaattttttt
 5161 ttagtaaaagggtattattttttatacaaaaagactaacctactcctatcagggtttttc
 5221 ccaagacaacatctacatttttaaaaagaaaaaatgttttacatcgtagaagggtttgt
 5281 aaataattcgtgactggttgcataccttcattggttgactacaagcctaattctgtttt
71 **A E Q R Q R L A**
 5341 aattgacatttttctcacatttttggtgtttttagCTGAACAGAGACAGAGACTTGCCG
79 **A D E R R R E Y H E E Q R N K Y E N Y A**
 5401 CAGATGAGAGAAGGAGGGAGTATCACGAGGAACAGAGGAATAAATATGAGAACTACGCTG
99 **E E E N D**
 5461 AAGAAGAAAACGACGgtgagctctgtcaggctcaaatcacttacctgtcggccatgatgga
 5521 tcaggcagcttttagtagcattctaagatcattcacctatatccaagaactttgctata
 5581 tctcacgcaaaaagggtttaaataacattcagttgaacctggttggtttacaaaataaa
 5641 gttatcaaaaacaaattgtattaaaaacaggatattctgatttaaaaaatataatataca
 5701 actaaaccaagtgattacctgaaatttgtagaaaatgtattcaggctacactagcgcagt
 5761 aaaacatcaataattacatcaaatatttgctcaaagacttgattgtactatgtagaca
104 **E**
 5821 tgattaatattctaatacacatttaacgattaaatttcatcaattttattcctcaagAG
105 **Q D E R T R E K T E Q W R E F H Y D G L**
 5881 CAAGACGAGCGCACCCAGAGAGAAGACCGAGCAGTGGAGAGAGTTTCACTATGATGGTCTG
125 **D P S Y E Y N R H T I *****
 5941 GACCCGTCATACGAATATAACCGACACACCATCTAAatcagcgggtaaaactacattcaca
 6001 acagcgggaaaaactacatctaaaacagcggtaaaaactacaaaaacacgggtagaaagctt
 6061 taaagtaacttccccctgctgaaaaatccagcttaaacagctctaggatggttggtgctt
 6121 tttagctggttttttagccaattctagcctggttttagctggacacgctgggagataacc
 6181 agctaaaaccaacttgaccagcctagccag

R10 DreGRP2 *Danio rerio* from Chromosome 4 and EST EE708256, EE695641, BM037443, BI983340

1 **M A W T H T**
 1 ctgtgcttctggtaccagctcaagacactctgatcttaattATGGCCTGGACTCACACTG
7 **V L L S L L P T V L V L I**
 61 TCCTGCTCTCGCTGCTGCCACAGTCCCTCGTGCTGATCGgtgagtaacaacactacatat
 121 ttaatttatatttatataatatacacacgcacaaatataatatacaaaaaacaaatgaaacca
 181 gtaattaaaagatgttttatgatgtatataatataaaataaatgataataaacatgcctaa
 241 aaaaatcttatttaaccattttttatttaccaggatttggttggtactttgatttatagca
 301 ttgtatttaataatttaataatcattcataagctatgatataaaaaagatgtttattatt
 361 attattttttattatttttaagttgtaaccacagcagcatgtctaataaatgttttgaat
 421 ttgtttgaaagcacgcttcataatataatttggtttatttattcacaattgctttcatttc
 481 ttgatgtgcttcaaccatatacatgtaattttacactttaaactcaaaataaaagtgggtca
 541 taacaagaatttcaagaaaacaaatgtcaatattgaggtaaagatttatataataatata
 601 aaatataacacaaaattctaataaatatagcaatttcagcattatacattcagaatttttaa
 661 gaaaaaagcatatttgtgagacttttttatttttaattcttgatcttggtggaagagaaaa
 721 atgttattaaaacaagttatataaaacgtatataatataatataatataatataatggtt
 781 ttcccagtcgagcagctgcagaacgacggctaagctctcgaggatctctgccttggtttc
 841 aactgacacaaaagatgaaaaatgagctgctgccttttattcttaggctgagcaaatgaa
 901 cattaacttattacatggttgattgtaactcaattctgattggtcagtcagtcagtcatttc
 961 aaggtacggttattctgagataacaaccactaaataaacacaggctcatccgggaaatccaa
 1021 atcattttgactatcaatgaacatacttgcatccagattcgtatgtatttgctgtcttg
 1081 ttttgagtttttgctgctggttgccgctcttgatgaatgaatcatacgtagggttattatg

1141 ctttgnnnnnnnnnta
1201 ta
1261 tatatatatatatatatatatatatatatatatatataaaacaacagattagggaa
1321 aaaattaacaattgccattaaaaaacatcctgtggtgagatgcaatctcagaatagcaa
1381 aaaaaaaaaaactaataaaaatttagttaaacaggctctaaatnaatatgtattaag
1441 atctcataaacattccccaaaacacaatatcagctaaagaaaatccactgttattcatata
20 **A L T G V E S A A V K D G K**
1501 aactctttttttcttttagCGCTGACTGGGGTTGAAAGTGCAGCTGTTAAAGATGGAAAAG
34 **D R K A Q**
1561 ACAGGAAAGCTCAAGgtaagtccaacacacacacacacacacacccacacatgcacacac
39 **G P S K Q V F V P A S**
1621 tttttcctcttactctattgtttttgtagGACCATCTAAGCAAGTTTTTCGTGCCAGCATC
50 **D A S N F F K R R A R R S P K T Y E E Y**
1681 TGATGCCTCAAACCTTCTTCAAACGGCGTGCTCGACGATCTCCTAAAACCTTATGAGGAATA
70 **Y**
1741 CTATGgtgagtgcggttaacttcggcttgttttccacatctcacttctgcttttctcttct
1801 taaaatcccaaatcaaagagagtattcctgctaataatgcaatttgacaattaagagct
1861 taaagtaaaacttgggtaatcctttaccaaatgcatcttacttcaattatgctaagc
1921 gcaccacagcagggtccagatgtgaagaatcgagatnaaaagcaacttaatttcttct
1981 gtcacatattagaggaaagaaggaagtgcttgtggtcctattttattgcacatctgttcac
2041 tagataggaaaatgtgagggtggttatcagcaccatggataaaaaataaccagaactgtct
2101 aataatgataataaaaatgaacagtaaacattattattataactacatttgtttaaatacaa
2161 aacagaccctgtgtaactcaccggccactttattaggtacacctgtccaactgcttgta
2221 acgcaaatttccaatcagccaatcacatggctgcaactcagtgcttgggcatgtagac
2281 atggtcaaggtgatctgctgcagttcaaaccgagcatcagaatggggaagaaagctgatt
2341 taagtgactttgaatgtggcatggttgttgggtgccagtcggaatggtctgagatnaacag
2401 aagctgctgatctcctgggattttcatgcacaaccatctctagagttatagagaatggt
2461 gcaacaagaacaaaatccagtgagcggcagttctgtgggcgcaaatgactttgttgatg
2521 ccagaggaacagaggaagaaatggcagaatggtccagctgatagaaaggcaacagtaactc
2581 aaataaccactcgttacaaaatgaggtctgcagaagagcatctctgaacacacaacacgctc
2641 caaccttgaggcggatgggctacagcagcagaagaccacacagggcgccactcctgtcag
2701 ctaagaacaggaaactgaggctacaattcacaccggctcatcaaacttgacaatagaag
2761 attggaaaatagttccttggctgatgagctcaatttctgctgcaacattcagatggt
2821 gggctcagaatttgggtgcagcaacatgaaagcataaatccatcctgtcttgatcaacg
2881 gttcaggctgctggtggtgtaatggtgtggggatattttcttggcacacttgggctta
2941 ttagtaccattgagcatcgtgtcaacgccacagcctacataagattggtgctgaccat
3001 gtccatccctttatgaccacagtgaccctacttccagcaggataaacatgccatgtcata
3061 aagcgtgaatcatctcagactggttttatgaacatgacaaggcgtccactgactcaaat
3121 ggcctccacactcaccagatctcaatccaataaagcacatttgggatgtggtggaatggg
3181 agattcacataactgacaaatctgcagcaactgtgtgatgatcatgtcaatatggatg
3241 aaaatctctgaggaataactccagtaacttgtgaatctactccacaaaggattaaagca
3301 gttctgaaggcaaaaaagaggtccaactggtaactagtaaggtgtacctaataaagtgcc
3361 ggtgagtgataactgtaatacatcatagctgctattttatgaagttctttatgttttta
3421 tccaatggcagaaataaatcccacatttccaagacacaaacaaaagtgagatgtaact
3481 tgcagttatgttttattatttttataataataataatatacgttttattttatattgt
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9121 ATGATGGTCAATACCCCTCAATACCCCTCACCACCGCCAGTACTATTAAacaaccctctga
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241 ggagagactggctctgctggctggatgcaagggaccagggcctcacaccagaccctggc
301 aagccacagatacttcaagggttggctctgataaggactcccctcgaggtgctgcagcc
20 M L Q Q G T G V S V G T
361 ctcacagtgtgctctcattccacagTGCTGCAGCAGGGGACTGGTGTGTCAGTGGGCACC
32 R Q V E G Q E A Q E
421 AGGCAGGTGGAAGGACAAGAGGCCAGGAAGgtgagtgcaggggcccagggctgcaa
481 ggtgggtgggcccagctccggtggcagccctggtgagcccgtgctgattacgactggcctc
42 G V E Q R I F M Q E S D A S N F
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74 **A E N R Q K L R A D E L R R E**
2521 ctcttccccattcccagCGGAGAACAGGCAGAAGCTGCGGGCTGACGAGCTGCCGAGAGA
89 **Y H E E Q R N E F E N F V E E Q N D**
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107 **E Q E E R R R E A I E Q W R**
4441 acttctctctcctccacagAACAGGAAGAGCGAAGGAGGGAGGCTATTGAGCAGTGGCG
121 **Q W H Y D G L Y P S Y L Y N R H H I *****
4501 CCAGTGGCATTATGATGGCCTGTACCCGTCATATCTCTATAACCGCCACCACATCTGA

R12 EeuGRP *Erinaceus europaeus* from WGS AANN01496954, AANN01190533, AANN01168314, AANN01168313

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34 V V G Q E T Q K
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42 G G
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44 E Q K I F M Q E S D A S N F L K R R S K
481 AGCAGAAGATCTTCATGCAGGAATCAGATGCCTCAAATTCCTCAAGAGGCGCAGCAAGC
64 R S P K S Q D E V N
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107 **E Q E E R S R E**
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115 **A I E Q W R Q W H Y D G L Y P S Y L Y N**
 11281 GCCATTGAACAGTGGCGCCAGTGGCATTATGATGGCTTGTACCCCTCCTACCTCTATAAT
135 **R H H I *****
 11341 CGCCACCACATCTGA

R13 *FcaGRP Felis catus* from WGS AANG01634421, AANG01038856, AANG01038855, gnl_ti_653612560, gnl_ti_647722381, gnl_ti_646731833, gnl_ti_652528346, gnl_ti_843738509, gnl_ti_843738508, gnl_ti_823754823

1 **M A W R Q L L L A C C L S A A V L L T**
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 61 gagtatggggagactccaggttgcactgggtgttgggtgaggctgctcaggtggcccaggt
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20 **T L Q E G**
 361 gttccccttgggggtgctgcagccctcatgctgtgctctcccacagCGCTGCAGGAGGGCG
25 **A G A S V G T Q Q E A G Q D V R E**
 421 CTGGTGCATCGGTGGGCACCCAGCAGGAGGCAGGACAGGACGTTCCGGGAAGgtgagtgca
 481 agggccaccccgggggtgcagggctactgaggtgccctggtagcccatgccgctcgtgac
42 **D V E Q K I F M Q E S D A S**
 541 cggcctctctcaggtttcagATGTAGAACAGAAGATCTTCATGCAGGAATCAGATGCTTC
56 **N F L K R R G K R S P K S Q D E V N**
 601 AAATTTCTCAAGAGGCGCGCAAGCGGTCCCCAAAATCCCAAGATGAGGTCAACGgtaa
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82 **A N E L R R E Y Y E E Q R N E F E N F V**
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102 **E E Q N D**
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 6121 ctgctgacagtggtgagcctgcttaggattctgtctccactctaccgactcctggt
 6181 tgctatctctctcagaataaataaacttaaaaaagcaaaatataaaaaaaaaaaaaaa
 6241 acacaacacattaagttttaagcctgatgaaaaatccttataatgccattgcttgaa
 6301 gttgacaatcattgccttccatgatttttttgaccataaagcccatcatctcttgcac
 6361 tattcctgggttatcttgtacttgttcttacttgttatttctttgagccaatttctg
 6421 gtgaaggctgtcccccttgggtgattatgtacgggaaggggactgaaccaacacataga
 6481 ccttgactggctctcctggcctccagctctttcacctgctgggcttggctctcaccttc
 6541 accagggaggcttttggactcactgttccctcacgtctttcactttagctcttctgtcac
 6601 cagtgcaccagggcacagtttgttcaggtcactacagggtaggcagtttggattgatggc
 6661 tgacaagagcttgggtgctctcctcaggtcagagactctccgtactaacatgacgact
107 E Q E E R S R E A I E Q W R Q
 6721 cacctctgttccccagAACAGGAAGAGAGAAGCCGGAAGCTATTGAGCAATGGCGCCAG
122 W H Y D G L H P S Y L Y N R H H I ***
 6781 TGGCATTACGACGGCCTGCATCCATCATATCTCTATAACCGCCACCACATCTGA

R14 GacGRP1 *Gasterosteus aculeatus* from WGS AANH01001437, gnl_ti_849683298, gnl_ti_868231295, gnl_ti_867841229, gnl_ti_849476849, gnl_ti_864277805, gnl_ti_867326652, gnl_ti_849400160, gnl_ti_855302752, gnl_ti_831393368, gnl_ti_866768864, gnl_ti_826447176, gnl_ti_868458573, gnl_ti_868250204

1 M S W T Y A T L L A L L T V L L A L C
 1 ATGTCCTGGACATACGCGACCCTCCTGGCTCTCCTCACTGTGCTTCTGGCACTTTGCTgt
 61 gagtgttggtgcagaatcattgacgtgatgtttttgttttttttcttttcttcttctgtat
20 W
 121 gcacggaacctagaacacatgtgatttgatctgaagcctccacgtttggctcccgagGGT
21 S P E A E S A A V H S S T G I A K E P Q
 181 CTCCAGAGGCCGAGTCTGCAGCTGTGCACAGCAGCACAGGCATCGCTAAAGAGCCACAAG
 241 gtgaggagccgcatcagccgcttctcctcttcatcctttgtcacttgaagtgtgtaagct
41 G P L K E I F M K E E D
 301 gaacctccacctgatccccactgcagGGCCGCTGAAGGAGATCTTCATGAAGGAGGAAGA
53 A S N F F R R R S R R G A K S Q D E I N
 361 CGCTCAAACCTTCTCAGGAGACGCAGCAGACGGGGGGCGAAGTCTCAGGATGAGATTAA
 421 CGgtgagtcactgaccgggttcggttggcagtttgaagcgaggtccggctccgccgag
 481 gtggttctgtgtttgcatcgattgcatccacattgggtctcgtgtaagaacaattcct
 541 aacaaaacatcagtccttacaattattgttttgcaattgtcagcctgcaatattgact
 601 aaaacacagtcacttcttaataattaataataataacttaacaactttgtg
 661 ttcaatcaagagtttttttattcctacttgccttcaaactgtacagtgatgcaactgta
 721 acacaaattctgctaaaacgaccagataaatcttataacttaataatgaatttctacaaa
 781 ttgggtgtaactttctttaaataatataaacctaaacgtaacaaaacgaatgatagaaca
 841 atgtttgttgagtatgaacaatgtgaacaaagagcaaatatctgtgatctgtgtgtc
 901 ttgtaataaaaaaccgctgacattgtccagtcactcacatttccctccctctcgtccaggg
 961 ttttgtgatttttggccaaaattgaataataacacaaataatattttgtcatttgcactt
 1021 tgaatgaacagctaacgaaatcttaacaacctccgaacattaactggttggggaagggc
 1081 ccctgacccgagggcgacctcagacctcacagcagctcgtcggctggacgaggcaggaagga

1141 cccaaggggctgaagggagctcacagacacacacacaccaacacacacaatattttta
 1201 tttcaagtgttgtaaaaattcacacgctgtacaacgtttgacattcccagagtgtttaag
 1261 ggccccggttatgtacagttctgccaacaggaaggtgagagcacacacactgaggccgctg
 1321 cgctgaacccgagttgtgtaaacgctgtcaggtctccgtgtgtaacaacaggacactgt
 1381 gtgccgttaaaaagctggcatacagtgaacgcgaagcggtgaaaagatgagagcgagtggg
 1441 tgagcggctcggctcactgcttaatgaggaatgtgccggcacacaggccgaaagggttcag
 1501 cgtgagaaaaagacagagacagaactgtgctcactttgaggagctctctcctgctgcata
 1561 acgaaataaaaagcaattcgcttgaggccgggtgaagtttgcaacggaaagtgtttgaaa
 1621 actggttttgtgtcgccatgttttagttgggtgaattagtggtgaatgttttggaaagcaac
 1681 gtattgacatgaaagcgtagacaacagactctaaatgctgctgttgaccttttgagaga
 1741 gccagtgagccggaaaaagcaactcggctcgggtgtgtcggggaggaaaaatgatggatga
 1801 tttactctgctgtgcaaaagtataaaatgtgagttgtcccttcattgccaggatgtctt
 1861 catctgcaggctcatcagtgatcattaaaacatgacttgaaatcacagaatgagttccac
 1921 ctccgacttcacttcacttggaatccagttaaaaggtcaaaggtgatgacctgactttgc
 1981 aaaggttaccgtggcaatcccaaacctcttatctcagctgatgggtctttctaacgctac
 2041 caaggtccgagcgtgtgagttttgagttttgagatgagcacttcattggtgccccggtcgt
 2101 cttggatctccaatcctgcccgtcagaggtcacatgcaggtcatttctctgcttctata
 2161 ttagaaccaacttgaaacggatcccagtggaacacatcctcactgaagaaactgtaa
 2221 tattgcaaaaactcgttttgctttgctgactgtcgggggtgcttggtgagttttggataaa
 2281 gaacttcgatcttagatcttagatcatcagacttcatttcaccttttggtggtccgagtt
 2341 tgggtgtttttgattgtcggccatggaacccatcgactgtagtgaatcacagcgtcacca
 2401 caaataaccgtcttcatgaagttgactaaaagcagcttttggtcagagacagtgagtcatt
 2461 ttttgctcgattgtcacaggtagcaaacagtcattgtgttgactgtgtgtgtctgtac
 2521 ttgtttatgagctctcaatgaaaactcgttaatccagtttatttctagaccaacatgatt
 2581 ttcaagggaaaagtcaaagttgttattttttgggggaaattatttctgcttcagccaaa
 2641 ctgagcagattcaattgaagttttgttggtcataaaaaacttttggttagctacaaattaa
 2701 tgtaaaaaaaataaaaaataaaattgttcttggtgggtgggagattaaagaacagcagctc
 2761 ttttatgaaggtttatgatgttcagctcgtctgattactatgacaaaaagaactgaattg
 2821 tagatgtttacacgcaattaatgctcatcatcatcatcatcatcctccccctctgt
73 A E Q R Q I L A A D E R K R E F H E
 2881 gcttgcagCGGAGCAGAGGCAGATTCTGGCTGCAGATGAGCGGAAGAGAGAGTTTCACGA
91 Q K R N E F E S Y A E E E N D
 2941 GCAGAAGAGGAACGAATTTGAGAGCTACGCTGAAGAGGAGAATGACGgtacacttgatgt
 3001 agctgagagggaggatttcattccctccaccagcacatttctccactaaaactctgaaat
106 E Q D E R T R E S T E Q W R E F
 3061 aaatcttcccagAACCAAGACGAGAGGACCAGAGAGAGCACCGAGCAGTGGAGGGAGTTTC
122 H Y D G M H P P H E ***
 3121 ACTACGACGGGATGCATCCTCCTCACGAGTAA

R15 GacGRP2 *Gasterosteus aculeatus* from WGS AANH01007814 (pseudogene)

1 M S W T R V F V L S L L T T L L I L T
 1 ATGTCCTGGACTCGAGTCTTCGTGCTCTCTTTGCTCACCACCCTCCTCATACTGACCCgt
 61 gagtacctttttgtgggcagctggggcaagtatcttttgggtgggtcatacatcctctg
 121 tgggcgatgagcagaaaaagcatttaagatttaagtgctaataatttgaggctctgttatta
 181 tagaaataaagactaaaactagtgggtttttgttgctttgagcatgatataatttggtgg
 241 atcagaatttgatgaatcaaatgaatcaaaaattctgggtcattaaagtgaattgttgca
 301 tatttgcatacaagctttatgtaatgttttcagtgagagaacaggcatcgaaaagctgt
 361 aattgtgtctggagatgtccagtcgcttctccaaaagacagtcagtcacagcatgagaca
 421 cgcgtccagaggacgactgggattaggaccattcagtcacaatgataagaagcagcattc
 481 atttgaaatgagccacatcagaccgagtgagcaagtcaacaagaaccttatagtttg
 541 tagaaattataaatattatgtttgtggctgttttaattcaatttaaaactatcacaatgg
 601 tcatttgtagaggaacaattaaggccaaagcaaacctttattatcttggtgacatcagagg
 661 tccgtcttaattataatcttgtttgacataatttatgtattgcatgtattttattagc
 721 agtttcttgtgtttttgtcttctggtttctaactagaaactgtagcagcaactgttagagg
 781 acaatttaaacacaaaaaggtgcaactaaacattagaaagctagaaagctttatgttaatg
 841 ttgtaactcttgtgttccggcatagaagtttagggtctattctgtaaatcatgaggattt
 901 tgtggctccgctttaagaaaaaaaataagttatcagttttcagcttcttatgtcttctgct
 961 gtttacaccaacctttttagtagtatcttcagaattctataccacaggtgaaatagcaa
 1021 taccgttaagcaaatctctgcatgtgtatcaatattggcccatatgcatgcttccctgt

20 L S S V V G S A A
1081 aaagacaagaaatgattggttctcttctctcagTTTCCAGTGTGGTGGGCAGCGCGCGCG
29 V L G D S K A V D P K
1141 TGCTGGGCGACTCAAAAAGCAGTTGATCCTAAAGgttacactccttcaataatctcgtcc
40 G A
1201 cacatcttctccccgtgtgaccttcactttctgacctctgaccttctgaccttttagGCGCA
42 A R Q V F V P E S D A A N F F K R R S R
1261 GCGCGCAAGTGTTCGTGCCGAGTCGGATGCCGCCAACTTCTTCAAACGCCGCGAGTCGC
62 R S T R Y Y E L Q G S
1321 CGCTCAACCCGATACTATGAGCTGCAAGGCAGgttcttcggtatccatccatgtgtctac
1381 gggccggtagttcccaggatgacatgatctgaggtttttgaccgcaagctgtagaagttc
1441 aggagagaaataggaagagagtgtgaaactccagcaggtgtgttccacatagttcca
1501 gctctctagtctgactccgacacacacacacacagcactcacacacacacagcact
1561 cactggaggctgcagaaggagtacagggtagtatggagcaggctctccttctctctcct
1621 ttctcagtacaataagctcgttctctcactcgcacagcgcgatctacacttcaacaaa
1681 atgaacaaacacacagcagcagaggtgttccaggccgaagatgcaaacacacaggaactcg
1741 tgatcatattctggccctcaaatacttcgcaaaataggattcctgtaaaagtgttaaag
1801 tgctcctgcggccctgatggccctgatggggcccgcaggagcctcggctgtgaaaaa
1861 cagccccacattctgggaaccataaaaaaagcctgatttcccttccaggacggttaa
1921 tgagaacctcaggggacagccgaggagagtttgtgagaactcttgcagtcattttgtca
1981 gaaagtgttggcgatggcaaagtgcctctgggtaatgctgagaatagcttgtattgggt
2041 tgtcggccaatttcaggattttatcatcagtttaacctcatttagtgtaagatagaaaac
2101 ccaactgaaggagaaaaagcagaatgtcactccttactgcatagatccatggttgatgatta
2161 cataatcatagaatgagctaattctcgatcacattggattgtgggaaacctcatcagttt
2221 gcagcaatgaagacaaaacagaggcaactcaccggctgtcaactattaagtactttca
2281 catgagtgagggacgctaaatcatattacaatcacagtttaacatgtttgcatgctaac
2341 gttttctagttagcaataaacactagtgggaacagtgaaagcggaggagtcgccgctaa
2401 agcatactctgctttatggtctttttgaccactagaggtccctggctgagagaaagttaa
2461 gtaatgttctcatggacatctatacaatcagacttcttcttgcgctcagcaccctct
2521 gctaactcttcgaaaataatgcatctggaggttgcgctcggccttcaaaaaggcccaatt
2581 gaattgcaatctattcaatgtgtgttgagggattctttaatgtccacctcaggtgagcc
2641 tggaggaaaatattagtgatcttctgttgacattgagagacatttctgagctacgggtgg
2701 ttctgtgacagggcggccatttgggaaatgttgtacggaatgcaatgtccactagatag
2761 ctgtagagatctgtgtcaatctgaaccacagtggcatactgaccttcatccatcagtgct
73 R A E G E A F S V R A E
2821 ttttcctttcttgtttccacagCCGAGCAGAGGGTGAGGCTTTCAGTGTACGAGCGGAGG
86 E G V Q R G A E G ***
2881 AGGGAGTACAGCGAGGAGCAGAGGGATGAGTACGACAACACTACGTGAAGGAGGAGCGTGAC
2941 Ggtgagatcctcgatggaatggccttcagttccttctcaaatgctttcctctcaaccccg
3001 gcatccatcacattttaatttaagattatgtttacttcatcatcactttgttccggtcaca
3061 ctgaattgagaaaagaaatcaacaacacactgttgtggattacgattttacagttttaa
3121 ttattttctaatactccttgacttcatccatctgagtcgtgatgaggaccacacatgatt
3181 ataacatgagtacatgttggactaaatagaacattttccctctacaagactctggatca
3241 gtaaacacacccaagataaactcaaatgactgttatcacgagactgctccctatgcagaac
3301 acatcatgggaaggcagagtttgacccttgaacgacacctctcggccccgacgagctcgg
3361 accaaagcggagcgaccaaaatcaaagtgtccatttgcggtccaccagcagctgacaata
3421 ttcttgcggctgtctgtctggtgtgatagttgcagtggcagtttctaaactaaaaac
3481 tgcaacaccacagagatgcaagttggtttaagatagacagtgttttaagtagtttgggt
3541 caatgaggtgttatagaagaaccagctccaccaggccccgaacacattttgtcacattat
3601 tggctgtcaaaccagactcagacaaaacaaacatgtatgagctgaattcattgcatt
3661 tagtgtaagtgccagcaataatgactctgctgacctttttcagcaggttgttgcagtt
3721 gcagctggtttcaacgagttggagatattgtggacaaaagaattccctgataaatccaac
3781 ctggctgtttgcattcttagaaatagtgtgaggatgtggcgccacttacactacggttta
3841 gactaaatgctaacaatgtacaatatttttttctgatagatttgacactaatatcagag
3901 aatatccaatttcttttccaaaagaaatgtattcttaacatagttctttctgggtattc
3961 atcaccattatttatgaagtctaaaattggctttaattactacctaattacacagcagac
4021 atcattatctttcatttggattgtgttctctccttttggcgcttttctctgtaaccac
4081 atcagcagccatgcgatcttttaccacttatttcacttttttttaaatccatagAGCA
4141 AAATGAGAGATCGAGGGAGACGAATGAGCAGCTTCGAGAGTATCATTACGACGGCTATCA
4201 ACCTCGTACTACTGGTTCCACTGA

R16 HsaGRP *Homo sapiens* from Chromosome 10

1 M T W R Q A V L L S C F S A V V L L S
1 ATGACTTGGAGACAGGCCGTCCTGCTGTCTTGCTTCTCCGCCGTGGTGCTCCTGTCTAgt
61 gagtacaggagggtcaaggtggagggtgttagttacatggtaagggagacttaccatgca
121 caggtaaaggctgctcaggtgatgcaggtagaagaggatgcttattgttaacatgtgtg
181 tatgtgtgtgctcgtgtgcatgtaggacacaatgcaatacagaaaaataataataata
241 aaaaacagtaaaagaaagaaacaaaatagaaaaaaaaaccaagccagcttgcttgggtggg
301 tcctggggagattggctctgcagctggtacgtgagaaaccacgggccccctgccaggccc
361 tggcaggacgcttagcctggaaagagagatggggactcagctcagggctcgggctccct
20 M L R E G T S V
421 ctgatgctgcagcctcactctgtgcccttgtcctgcagTGCTGAGAGAGGGAACCAAGTGT
28 S V G T M Q M A G E E A S E
481 ATCTGTGGGCACCATGCAGATGGCGGGAGAAGAGGCGAGTGAAGgtgagtgcaggggcca
541 cccacggggcagggcaggtgcagccagcgaagcagcagcccagcacccccacactgctg
42 D A K Q K I F M Q E S D
601 gtgacaggcctctcccgggtttcagATGCAAAACAGAAGATTTTCATGCAGGAATCAGAT
54 A S N F L K R R G K R S P K S R D E V N
661 GCCTCGAATTTCTCAAGAGGGCGCGGCAAGCGGTCCCCCAAGTCCAGAGATGAGGTCAAT
721 Ggtaaggatgctggagggaccccatcccgcgtccatcaccacctctgctcacacccccg
781 gctcctcctctcccacagtgcagccgggagcagcaggtgagctgggacgaagggctcacc
841 ccagggtatcaaagggactgcagctctgaatgagaaattacaccctatttctgactgta
901 ggtcgtatattggattgaatactttgtcagggtaggaggccccacctcgaagaatga
961 cttggagacaggtcctcttgccttcttggccttcttggcctatgatgctacattaacacactaa
1021 cagggataaagatgcattggatttcagaaaggtgtagggagggaaatctatattctggct
1081 ggaggcgacccacacatcagtggtgtgcttgcgggactggccagcacaccttctgtat
1141 aagagcaacagcatcgcacatggggaaggcacaggacactgggtgctgagaaatgtgggt
1201 ctggggacagctgtgctgctaagtggccttggcacttctcctcctctggctcctaatttcc
1261 ttatttataagcctctgaaagagctgtgttcagccagcagaggttttttttttttaagt
1321 tttcattttcaacacattggggtagcctgtctgttgacagcctgctgtagggcctgtg
1381 gagccccggcttcagggctcctcatgcccttcacctgccaaccctgagggcatttgagtt
1441 tctactcctgaacctgcttctccaagatgctgagctcagacagtatctcccagctctct
1501 ggcttgagctcttctcctcctcgtgcctgtgggtgaatgaactctttgtattcttcagggca
1561 ctgagcaaggtgacttgcttggtaaaaataacaggactgttttcaaatgatgggaagaac
1621 agagatagaaaatgcttggagatgaaatttcttttttaaaaaaattgaaatagataaac
1681 cgtgctaggaaaacctccaggcctcatacaactggagattttaaagtggccaatgtcaa
1741 gaagcactgaaaggttgggaggggggctggactgtttttgattaaaatgggagaagcaat
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1861 ctcttttttttttttttttttttttgagatggagctcactctgtcgcccaggctgga
1921 gtgcagtgagcaggtccttggctcattgcaacctccacctccaggttcaggtaatactcc
1981 tgcttcagcctccaagtagctggaattacagatgctgcccaccacgcctgctaattttt
2041 gtattttttagagacagaattttgcccattagatggccaggtggtttcgaactcctgaact
2101 caggtgacccccctgcctcggcctcttagagtgctgagattacaggcatgagccaccg
2161 catggcctcttctgtcctcttaagctgactccaacaatgagctacaccatttagcctga
2221 agtgcccttacctcggacagaagctcagtggtgcaattagctcatgggaggtgcaggacagc
2281 ctgggtgaacacccaggattgtgcatgaatgcatctgctgtcaccacgtcaactcctgtgg
2341 atagcaggagggcagtgcccagcagatgcctcaggttgataaaagggcaggtgacagacac
2401 ttcagccaacttgaatttggaccagggagacaggcatctgacatctctaagcctctggga
2461 taaaggtgaagttactttagggtgaaaagagagtgatgatgaatgcatgttcttgagaaga
2521 aacgtatacaatgcacagaatgacacatagataaaaataactatcttgcctgaggatta
2581 aattgttcttattcattacgtcaaagctctaatttgtgacacctctgaaaagaccacttg
2641 ggaagattgtttgctgtcctgagtacacaggggacagaggacgcttctttaggaataggc
2701 agtgacttactaagctcctgcttcttaaacctaaagccccgcacctcccacaacggctt
2761 tctggcgcttggagcaacatcaggaccacagtggtgggaagaggggaagctgagccagc
2821 agtggcgtgtgggaacctggtagcctagctctgccccaatctgctgtgtgacctctgta
2881 ggtcatgcacatctctgagcctgaatcccctctgagaaatgtgtgaatgccagtgagag
2941 gtggggcatgggtatggatgggataaccaacccttctgcccagactcaagtttctgcaa
3001 ctaagtaggtcacggcagacgtttgggaagaacaatccagacgtctggaatctgcacta
3061 agcccagttcacagataaacttgatttttaactctgagtttaagtaataagaaagtaacgaa
3121 ataactagtatttatataaattcattaattaaggtgaagcgtcttacttccaaggatttgag

3181 atggtttgtttgtttatattatattatattatattttaaagacagagtctcgtctctgttgcccagg
 3241 ctggagtgcagtggcgatctcaacctccacctccccggttcaagcaattctcctgcct
 3301 caccctcccagtagctggaattataggcacctgccaccacgcctggctaattgttgat
 3361 ttttagtagagatggggttttgccatggtggccaggctgggcttgaactcctgacctcaa
 3421 gtgatcccggcctcggcctcccaaagtgctgggattacaggcgtagccgcccaggcc
 3481 ggcctgagatggtttccaatattatcattttgcaaagacttttccttgtttctcccagca
 3541 cctctgtaatgtgggttggggtagggaacctgactttcccagcttctctgtcttctt
 3601 cagcaccctccagcctcctcttgacatcagagttgatggggcaaaaaaacagtacctcc
 3661 gtctccccatttgggtgaggggaatccactgtgagatcgtgagcgtgctgagggac
 3721 tggttcttctgcctagactggcctccctggcttcatgggttccagttgaagctc
 3781 gtgttgggggaaataccttgaagttagagctttacatcgtttctccagacaaccggg
 3841 aatttttattccaacagctgtaatgcttggtaaacttgcctatgcttttctccttatt
 3901 gaattataggctctttaagcagaggggaaggattttattttatgttttgagacaggg
 3961 tctcgtctctgttgccaaaggtggagtgcagcagtaacataactactgagccttga
 4021 actcctggcctcaagcaacctcctgctcagactcctagtagctaagctcacaggcgt
 4081 gagccaccgtatctggctggaaggacggaatcttcttattcggctttttaattccagtg
 4141 cttagcctacatcctggcctgataagagctcgaaaatgttgatggatgtgagattaag
 4201 ttgtattattcctttagggaatttggctgtatttgggtttccaagtggcc
 4261 tggataacttgagatgcccaccaactttataatcagagctaatacacttactctctggg
 4321 gcctctatcttctcatttgcaaagagggagctggatcagataatcaccttcaagtttta
 4381 aagtctgtgtcaggagttaataatcttcagggaagtctccaatcacaatccccacaaacc
 4441 actcatcccccaaccaggtgacttctcagatgaactgtgctccctcaagtgtgccccct

74 **V E N R**

4501 aagtgtcctcattcttggaggggcaactcttgccttcttttctttcacagTGGAAAACAGG

78 Q K L R V D E L R R E Y Y E E Q R N E F

4561 CAGAAGCTTCGGGTTGATGAGCTGCGGAGAGAATATTACGAGGAACAAAGGAATGAATT

98 E N F V E E Q N D

4621 GAGAACTTCGTGGAGGAACAAAACGATGgtaaagactcttcagccagtgtcttcaggggag
 4681 gtggagcgttggggagaaaatcacatggttcttcttcttcttaccacttttttt
 4741 ttttctttttgagacgaagtcttgcctgctggtgcccaggctggaatgcagtgggtgga
 4801 tcttggctcactgcaacctccacctccaaagtccaagcgattctcctgcctcaacctcca
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E

12001 ctcagtggcagggtcagagtcctcctgctcctaacagggtggctttgtctttcctcccagAG
107 Q E E R S R E A V E Q W R Q W H Y D G L
 12061 CAGGAAGAGAGGAGCCGGGAGGCTGTGGAGCAGTGGCGCCAGTGGCACTATGACGGCCTG
127 H P S Y L Y N R H H T ***
 12121 CACCCATCTATCTCTACAACCGCCACCACACCTGA

R17 lpuGRP *Ictalurus punctatus* from EST CV993994

1 R L H V A L L A L L P I V L I L T V L S
 1 CGGCTGCACGTAGCTCTCCTGGCCCTGCTGCCCATCGTCCTCATCCTAACTGTGCTGTCT
21 E V E S A A V K N G K E K A N E R H G S
 61 GAGGTAGAAAGTGCAGCAGTGAAGAATGGAAAAGAAAAAGCCAATGAACGGCATGGATCA
41 S K K V F V P A S D A S N V F K R R G R
 121 TCTAAGAAGGTTTTTCGTTCCAGCATCAGATGCATCAAACGTTTTCAAGCGTCTGGCCCGC
61 R S P Y S Y T E Y V A E H K L Q S A A S
 181 AGGTCCCCATATTCATACACAGAGTATGTAGCGGAGCATAAGTTGCAGTCAGCTGCCTCC
81 E R R R E Y Y E E Q S N E Y E N H L E E
 241 GAGCGCAGGAGGGAGTACTATGAGGAGCAGAGCAATGAGTATGAAAACCATCTGGAGGAG
101 S R N E Q Y E R N R E N A E Q W R E Y H
 301 AGCCGAAATGAGCAGTATGAAAGGAACCGTGAGAATGCCGAGCAATGGAGGGAGTATCAC
121 Y D G L Y P Q Y P H H R P Y V ***
 361 TATGACGGGCTCTACCCACAATACCCACATCACCGCCCTTATGTCTAAgCGTctcataaa
 421 accttgcagtggtgaggtcatgcacagttgtagcaattttttcttgaattgatttaatt
 481 ctgcacttttttttatataataataatctatctcttctaagtgcaatcatttca
 541 gaacatggtgaatataactgcttgcaatccaatctgattatattccttcttaacttgca
 601 tcatctgttttaattgtaaaaatttcgtaatcattttgtatgctttacatatagttata
 661 ataaaagtatatggtggatgag

R18 LafGRP *Loxodonta africana* from WGS AAGU01171167, gnl_ti_1756589002, gnl_ti_1730827536, gnl_ti_1721612923, gnl_ti_512455190, gnl_ti_524424075, gnl_ti_1688579201

1 X Q E E R R R E A I K Q W R
 1 tttacctttcctccccagAACAGGAAGAGAGAAGGCGGGAGGCCATTAAGCAGTGGCGCC
 15 Q W Y Y D G L Y P P Y L F N R H H T ***
 61 AGTGGTATTATGATGGCCTGTACCCACCATATCTCTTTAACCGTCACCACACCTGA

R19 MamGRP *Macaca mulatta* from Chromosome 9 and WGS gnl_ti_660699340, gnl_ti_555987740, gnl_ti_487176576

1 M T W R Q A L L L S C F S A V A L L S
 1 ATGACTTGGAGACAGGCCCTCTGCTGTCTTGCTTCTCCGCCGTGGCGCTCCTGTCTAgt
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 301 tctctggggagactggctctgcagctggatgtgagacaccacgggccccctgccaggggc
 361 tgacaggacgcttagcctggaagcaggatgggggtcagctcagggtcggggctccccct
 20 M L R E G T G A
 421 ctgatgctgcagcctcactctgtgcccttttctctgagTGCTGAGAGAGGGAACCGGTGC
 28 P V G K T P A A K E E A S E
 481 ACCTGTGGGCAAAACACCGGCGGCGAAAGAAGAGGCGAGTGAAGgtgagtgcaggggcca
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 42 D A K Q K I F M Q E S D
 601 gtaacaggcctctcctgggtttcagATGCAAAACAGAAGATTTTCATGCAGGAATCAGAT
 54 A S N F L K R R G K R S P K S R D E V N
 661 GCCTCGAATTTCTCAAGAGGCGCGGCAAGCGGTCCCCCAAGTCCCAGATGAGGTCAAT
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6121 gcaggtcaccacagggcaggggttggctgatggctgctgggctcagtgccaggtcagag
107 E Q E R S R
6181 tccccctgtcctaacaggtggcttcttcttccgcccagAGCAGGAAGAGAGGCCCGG

114 E A V E Q W R Q W H Y D G L Y P S Y L Y
6241 GAGGCTGTGGAGCAGTGGCGCCAGTGGCACTATGACGGCTTGACCCATCCTATCTCTAC
134 N R H H I ***
6301 AATCGCCACCACATCTGA

R20 *MeuGRP Macropus eugenii* from WGS gnl_ti_1271735495, gnl_ti_1271742823, gnl_ti_1621378153, gnl_ti_1621379482, gnl_ti_1660643159, gnl_ti_1271732118, gnl_ti_1343328989, gnl_ti_1321786655, gnl_ti_976207649, gnl_ti_1381504209, gnl_ti_975564957

1 M I Q K Q I L L L S C L T A F V L L A
1 ATGATTCAGAAGCAAATCCTCCTCCTCCTGCCTCACTGCATTGTGTGCTTTTAGCTAgt
61 aagtatgagccacagagaaacccccagctctttttaaagcaagaaagactataaatctat
121 attttctgccctgagaaactgtattttctagactgctgcagaagggtgtgtgtgtatgtgt
181 gtgcgctaagaaaattacacaga
241 gcagccagttttgtggttcttaggaaggggtatgtcctgtcacttagagggtgagagaat
301 tgaattccctaaactagtgattaggaaccagcgtttaaggatatgaacttgtgcatgtg
361 ggtaaaggggttcacccaagggatgctgggctgcttcattgcaacttctctgtctgt
20 M F E A G E G A A V G S K Q V
421 gttattttaccctagTGTGGAGGCTGGGGAAGGTGCAGCTGTGGGCTCTAAGCAAGTAG
35 A G E E D K E
481 CTGGAGAAGAGGACAAAAGAAAgtgagtagatctgctagttcagcaaagagggaaagccac
541 catgttctgctatctgtccctagaacatcctgggcccctgtgctcattgaaactagtta
42 N L K K I F L Q E S D A S N F
601 atgtttctgcttccagATTGAAGAAGATCTTTCTCCAGGAATCAGATGCTTCTAATTC
57 F K K R G K R S I K S R D E L N
661 TTCAAGAAGCGGGCAAGAGATCCATCAAATCCCGGGATGAGCTGAACGgtgggtgagga
721 gataatcactatgcccaacttcccttctgtctcttttcccagtttagctcctaggagcca
781 gaaggagtaattgttgactgagggtaaaagataaaaaaggactttcattcatttgaaa
841 ttgaaaatatgtttttgttatggtttcttcttactataactaccagcaatgttttagt
901 ggtctatcctcatacacactggatataactgcatgtatgttagttgctttcctcctatac
961 catagatgtcattttattatggaagaagcagtgacacagagtagagaaagtgtatgattt
1021 gacatcaggaggacttctgatatctactagctgggtaaccatgagcaagtttcttaacct
1081 ctttaagtcatacaattttctaagacttattactaagttatctgaagtggtgcaagata
1141 ttcccaatctgagaaaattggagtagtagtttgatgttttttctctctctttatcta
1201 tctatctatcatctatctgtctgtctgtctgtctttttctctctctttcctctcttctgt
1261 ctgtctctgtctgttcatctctgtctctgtttttctctctgtttctctgtctctgtctgt
1321 ctctctttctgtgtctctgtctcagtcctcatttctactctccctctctctctctctc
1381 tctctggctatccctctctcttttgctgtctttgtctgacctgtatttatcagcg
1441 cgggattcattcccagaagcgcaaattgctaatacatttaagtcttaacaacaccttt
1501 gaagacttgaactctggatcacatgacagcctgctttctggaggaatcaagagacttgc
1561 tgtcatctcctaatcgagaagtatagaccacgtaatgtaggattctttttctgtgacag
1621 ggnnn
1681 nnn
1741 nnn
1801 nnnnnnnnnnnnnngcaggcaaacgaggggtaagttagttcatcatgaaaagaagaaaa
1861 aaaccttgtgacaaacatatacagaaaagcaaaacaaattccaacatttttttaattaa
1921 tttttttcaattaaccaggtagttccaggaagcaaaatcctggagatgtttctactt
1981 gaaaaccagacatttcttagagggtggcaatgttgccatccttttaagttgacttag
2041 ccaggagagtgtagggttaaacctttcaggagctcaatatagacaagtgcacatagtggt
2101 gaagcaagctccccataggctgcaggaggcactggacagcctggaggacagtcggattc
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2221 ggggctgaatgatgggtccttggctaccctcaggccactgggaccaagggcaagcag
2281 tatttcatcgctgtagacaacacattgcatttagtggtgctcagccagaaaactttactttt
2341 atatttttttagagacaagtatttattgagtacttaataaaggacatttttttattt
2401 gacaaatgtaaaaaactcaaaaattttaaactagcaattaaactttactttaaaaatgaa
2461 cacaaatgagacatgaagatatacaaaagaaaaatctgggtttgcctatgaaacctgtgta
2521 atttaagcacagataagcacttagtaagtaaatctatctatttatccagccatctgtccat
2581 ctgtctgtctgtctgtctatctgtatgtccatccatccgtccgtccatccgtccgtccgt
2641 ccatctatctaatctatctgtctatctatctatctatctatctatctatctatctatcta

2701 tctacctatgtgtccttccatccatccatccttctgtctatctatctgtctgtctttctg
2761 tctgtcatctatctaagcagtttgatcaaataatggattatatattaataactttgca
2821 agttttaagccctttgtataatgtcagttattattattaatattgtgctatttgtccaag
2881 tcagtacaaggcaaggctaggcatcagttcatctaaaaaagatctgaaagtctcagttct
2941 caatttgagtaacagctcagagtggcagctaaaactgtaaggagattggaggttgatt
3001 gatacaaagcatcttgtccaggatttctaggcaggatgatggctctgtacaagtgaaaga
3061 ttaaaacccagtgacaataactatgtatcttgcagtgtaactctttatattatcttc
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3301 attacttctctttaatttcaacaaacaatttaggtccttggggactgaatggcataata
3361 gaaatgcattggatctgaagtgaaggctagacttaacgaattctgtgccaaagttgcttaa
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3481 tcaaaaattagttacatcaaaagaaattcttttcttttcatgactagtttctgttac
3541 ctacaataaaaaatcatgggatttagataaaaagggtccttagaggatcttaaatctaaa
3601 ctctctttttacagatgaggaaactgagtcagaggcattaagaaacttagccaaggtc
3661 gcatagttactgttcaccagagatttcaactcttactgtaacacacgtgacttgaatta
3721 tcacaaagcagttcattctttatgctacgggaagttagactttctgcccgtggaaaatagt
3781 ttgtatatgaaagtaataatattttaaacaatccctcactgagagttctattcctggc
3841 ctagggtccacttaataagataaataatttgcctcttctggattcccagggtctatgg
3901 caagtttgaagggttagctgtgacccaccctccttctctgtctttgtgcaattctatatg
3961 tgcttttcccaggagagatgtgatgagaagcaatcactgcgctaataatgaatgggtttc

73 ctaagcagggaggtcatttcttctccttctgtgaaactgtaaattctcttccacag**CGGAGA**
75 N R Q Q L R A D E H R R E Y Y E E Q R N
4081 **ACAGGCAACAGCTTCGAGCGGATGAGCATCGGCGGGAATATTATGAGGAACAAAGGAATG**
95 E F E N F V E E Q N D
4141 **AGTTTGAGAACTTTGTGGAGGAGCAGAATGATG**gtaagggtcgtgtgtgtgtgtgtgtgt
4201 gt
4261 taatgtaaaaatgnn
4321 nnn
4381 nnn
4441 nnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnaaagggtaaagttagttcatcaagag
4501 catttttatgtagacttcttctctctgatccctattgcttctatcttaatctgtttaagt
4561 tgcggcaggttcggactaattgcagtgtaagccaagagtcagtgagatgttttgagggc
4621 aacaggctggctcatgtagtctgaggtcactggcctctctacctggttggtccaactgc
4681 tctgcaaagttagaaggaagaggctcctcattcttagcctcttcccagctacaacatgga
4741 agaatgaactcataactattttaactgttattgttaataactattacttaagaaagggg
4801 tagccaggtggcacagttagatagagtgtcagggtggaattaggaagactcatcttctctg
4861 agttcaaactctgacctcagacacttactagatgtgtgagcccgggcaaggcacttatccc
4921 tgtttgcctcagttttctcttattctctctcacctggagaaggaaatggcaaatcactcc
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5041 acagaacagcaaaaaacttaagaatgagaagcagcttgagtaatggatagaatagc
5101 tggtttttagagtcaggaatatttggattcaagtccactttgacacacactggctctatg
5161 agtatgggctagacctgtgacatcattagaggaagctccttctggggcataaaagccaac
5221 atataataaaggcaaaacttgaaccaggttcttttggctctgagctcattctttttcca
5281 caagctgacagcctgctgctgtgtgaccttgggttaagtcaacttaccttagatgcacat
5341 gcatacagttaccacataaccatttctcaatgatcccccttttaacttttctcttggttt
5401 atggctccttagttgcctgccccacgtagagatccaaagttcccaccgctgtgatcctaa
5461 tcagtgtgcccctctcatctaaactccttcttagctggttaccacaacatggtgaggat
5521 gtggcttcatggcttctcaaaggctaaggctcctcatctgaaacagaaagagcctagaac

106 tctgatacatgacagaatgtctcattctctcccctccag**E Q E E R S R**
113 E Q I E Q W R Q W H Y D G L Y P P Y L Y
5641 **AGCAAATTGAGCAGTGGCGCCAGTGGCATTATGATGGTCTTTACCCACCGTACCTCTATA**
133 N R H R I ***
5701 **ACCGCCATCGCATCTAA**

R21 *MimGRP Microcebus murinus* from WGS [gnl|ti|1579205458](#), [gnl|ti|1550466286](#),
[gnl|ti|1556226203](#), [gnl|ti|1563042917](#), [gnl|ti|1568257074](#), [gnl|ti|1568907467](#),

gnl|ti|1550458209, gnl|ti|1570806093, gnl|ti|1526860226, gnl|ti|1547242628,
gnl|ti|1556832993

1 M T W R R V L L L S C L S A V V L L A
1 ATGACCTGGAGACGGGTCTCTGCTCTGCTGCTGCTGCGGCCGTGGTGCTCTGGCCGgt
61 gagtgtgggaggggtccagggacagtgtaggtgacacagtaagaggacttgcctcctgca
121 ggtgagtctgctcaggtggcacagctaaacgggggcatgctcattgtcgggatggccatg
181 cttgggatgtgtgtgcatgcgtgtgtgtgtgtgtgtgtgtgtgtgatacaatgtaataca
241 gaggggaaaaaaagcaagggaaaaaaagtaggaaaaaccccaaacccagcctgctggg
301 tggtttcctggggacacaggctctgcggctggtatgtgacggaccgagggcccatgcc
361 gggcctggcagggcactaaagcctggaagggaccacagagggccagctcggggccgaacc
20 V L R E G T
421 ccaccccaaggccgcagcctcactctgtgccttgtcccacagTGCTGCGGGAAGGGACCG
26 G A S V G T R Q A A G E E A P D
481 GAGCCTCAGTGGGCACCAGACAGGCAGGAGAGGAGGCCCCAGATGgtgagtgaggg
541 gccaccctcggggacagagcaggtgaggccagcgcggcagcctggcgcccccgctgt
42 G V K Q K I F M
601 ggctgtgacagcctctctgctctctctcggtttcagGTGTGAAACAGAAGATTTTCATG
50 Q E S D A S N F L K R R G K R S P P S K
661 CAGGAATCAGATGCCTCGAATTTCTCAAGAGGCGCGGCAAGCGGTCCCCCATCCAAA
70 D E V N
721 GATGAGGTCAATGgttaaggatggcgggaagggcgcccgccctctgctcgacccccag
781 ttccttcctctcccacaccagccagcgcagggacacagtgggggaatgaagccttcctg
841 ttcaaagtggctgccgctttgaattagaaatgacaccacagtccttgatcataggtcaa
901 gtgttgattgaaatgcatgttgggtaaggagcgaagaaagaaagcattcacatcaaat
961 gcacccggcagggctaagatgcatcccagttccagaaagtgacagtcgtaagggcgtggg
1021 gattatatgttttagtctggaaggaacacagcacatcagcctgtgctttggggagctgtt
1081 ggcacagggaccttctctgcaagaacaacagcactgcccacagggaaactgggtgctgag
1141 aagcgtggccttgaggatagcttggtaactcagtgacccccgacacttctctcctggc
1201 cctgatttccttattgatcagccccggaagcactgtgttcagcgcagcagccttctatc
1261 cttcacttccgatgcatcggggggagcagctctctgctgtggggctgtgcccctcgc
1321 tgcagggcactcgtcccctcgacctgcccacctcgggagaaggtgagtttcttaccct
1381 tgaacccgattctccaagacaccaagctcggactgtccccactgtgtctatggctcgat
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1561 agaaatgcttgagatgaaattatcgaatccaccacatgactcaagcgtannnnnnnnn
1621 nnn
1681 nnn
1741 nnn
1801 acggactagttcccacactacacaggtatgcagagtcgggagacgaggactagatgatcg
1861 tactaccatcacacataatcattttatctgagtcgatgcagtcatagaatagaacaga
1921 gtagtagtatcatatatttattatcaatggaagctccttacttccaggaaggattgaga
1981 tggtttcaatatcaccatctgcaaagaaagatgactgtcatttctcccagcactctg
2041 gagtgtgggggtgggagtaggagaccgtgacttgcagtttactgcttctccatcccc
2101 cctccacttcttttgacactggggttgcctgggggcaacagcagcactctgtccccc
2161 tcttcagtgaggggctctgagggccaccgctccaaggagttaaccatttgggga
2221 gccacatcccaatccctccaaaccataaccaccaccccaactagattctgattctca
2281 gatgcagtgctggtgtcccctgatgtgtgccccgaatgcctccttccaggggggaggg
74 V E N R Q K L R A D
2341 gggacaactcctgccccttgtcctttcacagTGGAGAACAGGCAGAAGCTGCGGGCTGAT
84 E L R R E H Y E E Q R N E F E N F V E E
2401 GAGCTGCGGAGAGAACATTACGAGGAGCAAAGGAACGAGTTTGAGAACTTCGTGGAGGAA
104 Q N D
2461 CAGAACGATGgtgagtgctctgcggccagtgacttccgggaagtgaacatggggagatg
2521 ccgcaggggttgagctcacttcttaccctaaagttaattggaggaggaagggagggc
2581 ggatctcctttcaactcgcacccgtgggaaccttgaaaagaagggagaaaacagccacag
2641 gggacttgagatggtgtggaagggacagaatagcattgtcaccgttggcctggggggctg
2701 cagggacagggaaactgtttgctgctgtgtgaatataaaaactccttccctccctcctg
2761 ctacttaggggtcactgttctctgcctaagcaccctaacccagtggttagctctggca
2821 cagctggattgggcagattccaaactcgtttcaagtgccttggattcacgtcaatgta
2881 acagctccaggtgccacttctcctggaatcagaatccaccacagtgggcagatgattc

2941 cataccggttacgnnn
 3001 nnn
 3061 nnn
 3121 nnn
 3181 acatctgttagggctgaatcaagggactaatctcaagctgctcaaataatctctcgga
 3241 cgttctcctaaagacattacaagcagaactttcttacttcatgaactcactctgacttt
 3301 tagcctttactatggagacttcaaataatggaacatgtgaggatgatgacccatgaaa
 3361 ccatcaccctgaatccctgtaactgagatctcccacacttgcgccatctaaccat
 3421 ccagttagtttaataaaaaaaccaaaatgttatctttaaagcttaggaaatacagaacagt
 3481 atggaggaaaaaaagccctctaagtcaccatgatttccctccgtgatgthttccagggtg
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 3601 tgttactctttaaccttgtgtctgagtgttactctttaaccttgtgtctgagtgtg
 3661 tctgagctggtggctgcataaagctctgtacccttggctagtcttgcggttaaagaat
 3721 gagagatgtggccctgctctcggctcattggttagccagctgtgactgtcacctggagc
 3781 ctaactcaggcagagtctgtgacttgtgtgctccgggtccctccagctctggcattct
 3841 gtctgccaccagggctttcaagcacacccggtgcatgcatcacagggcgggcggtttgg
107 **E Q**

3901 tggctcttcttgagtcctccgcataactaacagtggttgtgtgtccccttcccag**AGCA**
109 **E E R S R E A V E Q W R Q W H Y D G L Y**

3961 **GGAAGAGAGGAGCCGGGAGGCAGTGGAGCAATGGCGCCAGTGGCATTACGATGGCCTGTA**
129 **P S Y L Y N R H H I *****

4021 **TCCGTCCTATCTCTACAATCGCCACCACATCTGA**

R22 MdoGRP *Monodelphis domestica* from WGS AAFR03037208

1 **M I W K Q I L F L S C L T T L V L L A**
 1 **ATGATTTGGAAGCAAATTTCTTTTCCTCTCTTGCCTTACCACATTGGTGCTTTTAGCTA**gt
 61 aagtatgagcaacagagaactccagatccctttaaagcaaagataaattggatctccaca
 121 ctttctgccctgatcccattgggaggagaaactgcatttccaggctgctgaagaaggggg
 181 atgtatgagagtgttggggggctaagaaggttacacggaatggccagcttctgtggtttc
 241 ctaggagggggaatgtcctgccacttgaaagtgagagaatgaatccctaaactagtgatt
 301 ggggaactagggtttaaggatgtgatcttgggcatgatgggggttggagggtttcatcca
20 **I**

361 tatgatgcttggtgctccattgccctcagtttctctctgactattttcatctag**TTTCTC**
21 **L E V G E G A A V G S K Q E A G E E D K**

421 **TTGAGGTTGGGGAAAGGTGCAGCTGTGGGCTCTAAGCAAGAAGCTGGAGAAGAGGACAAAG**
41 **E**

481 **AAA**gtaagtagagtgtgctagttcagcaagaggagaaaccaccatctctctgccagctgcc
42 **N L**

541 tcgagcatcccagcgaccctgcaccttttgtgatcaggcaatgtttctgcttccag**ATTTT**
44 **K K I F L Q E P D A S N F F K K R A K R**

601 **GAAAAAGATCTTCTCCAGGAACCAGATGCTTCTAATTTCTTCAAAAAGCGTGCCAAGAG**
64 **S P K S R D E L N**

661 **ATCCCCAAAAATCGCGGGATGAGCTGAATG**gtgggtgaggagaccgatcaatattggtgcc
 721 aagttcctagccttctctgtttccttctcctgagctatctcctagtagtcaggaagagta
 781 attggtgtgctgagggtaaaagataagaaagtggacttccataaatttgaattagagaa
 841 aaaaatatgttttctgctgggtattatcttggttaccatactaccagcaatatttatttgg
 901 tagatcctcatatacactgggtacatgattgtttgtatttctggtttgcctttatattctc
 961 taaatggaatttaggctgggagacacagcaacacagagtagagaaagtgtgtagatttgca
 1021 acaggaacacctctgacattagctatgcaacctaagcctcagtttctaagacttatttt
 1081 ctaagtatctgaattggcagaaggtatcccaggctcaaaaatcacagaacatttctc
 1141 tctctctctctctctctctctgtctctctctctctctctctctctctctctctctctc
 1201 tgtctctgtctctgtctctgtctctgtctctgtctctgtctctctctctctctctctcc
 1261 ctctgtctctatctctgtctctgtctctctctctctctctctctctctctctctctcc
 1321 tatgatthttatcagtttggagaactcagcatggaaacttcccttggcgaacacaagggc
 1381 caagttgtgaatataattctagtttttagacaagtaacgctctgaaaaacctagaactcaga
 1441 tcaatacaatgactaaccatgcttctggaggatctggagaagcttctgtccaactctctg
 1501 tccgagtggtgatagacttgggtataaaacaaggcacacttctttggacatggtcaat
 1561 gttaggaataattttgcttgaatttgaatttgaatttgaaggagacttgggttcttctct
 1621 ttttaattgggaaaaaggaaggaagggaagaatatacattttttgttaattgaaaaacattt

5161 tggcaatggatctttctcctgtggccagttgggccatctggatcctgggggagagatta
5221 aaagagaaaaagatctttgtctgcttccctggaggaatagcctcctgaccattgccattca
5281 gaggaagagtcataatgctttcaattgttcttcagaagagaagctggatgaagaggtctg
5341 ttctctggctccataagggtcaaaagaatgaccaatccgaaagccctacttatcctttat
5401 ggacactagggtcatgtgcttctgccttatcttttgtattatctaaactctgccagatctg
5461 aaaaccagtggtcattatctccactttttgcaagaaagaaggtagtTTTTTTAATTTTTAT
5521 ttaagtatTTTTCCATGGTTACATGATTCATGTACTATCCCTCCCTTTCCCTCTGCCCC
5581 ctcccaaagccaacatgcaattccactgggttatacacgtattatcactcaatagctatt
5641 tccatattaatccttaagaaggccgTTTTTTTCTACCTATCCATGGCAGGAAACTCAGTC
5701 ccatcagatgattcattggggaccagagTTTTGACTCAACTGCAGCCCTGCCTATTCC
5761 caaacagaaaatctccccctaaactgtttaactgtaaacattgaggaattggtctttcc
5821 tggggagaaaagagaagagaacaagcatttattaagcatcatttatgtaccaagctctgca
5881 ctcaatgccttatacaaatcttgcttgagatccccctcttctggctaaagcatggagaaaggc
5941 agaataattctaagtagtctatccctcattccaaaaaggtagaaggtaactgattgtcagc
6001 tgttaacatagaatgaccaaataggaaggttcctaacagtggaaggatagattagaggt
6061 aggagagtagatagaggaagatctggttaggttattgtagactaaatgggaagtaacgagg
6121 tctgccttagaacgatggaagaaggaattgaggatgaggtgactgatacaagaaatatt
6181 gtagaatagaatcaatgggacttggtaattgattagatatcagaggtgaagaagggag
6241 atagccaatgcacagttccagtgtagagaaatggggaaagggatgccaagaaagaa
6301 aatggtgagaaggaagaaaaaactagagggaaaaactaattaatttgggttgggatct
6361 tgagtttgtggtgccaggtggggatatttgataggcagatgagacacaggactgaatcct
6421 ggtagaagatatgtatttgaaagtttctcacactcaagagaaatccaagaaagagtctg
6481 ttttgtgatagtggtgctcatttagtaatttctaggatgctgagagggtgaaatcgat
6541 ctctttaaatgagcttgtactgactaatgacttacttgggttcccaaagaccctttg
6601 actatggctccaactttgtaccactgtctctatttgctgttccattcacccaaattttc
6661 tctgctcacaccaagcctaataatccagtgatggagaatgagagtagttgtatgaggagac
6721 agaactgactgttttttcttgccttagcaagtcatccaagcagctgatgatggttg
6781 cagggtagatTTAACTCATTTCAAAATGGCTTGGCCAGGGCCAACCTAGCATCCAATC
6841 ccattcttatccactcagccttgaaaaccacacaactttattactacacttctacagagg
6901 tctaacctcaagacgggagcaaaactaagaaacatgcattagaatggatctgtaaaacat
6961 gagccaaacataagcacaggcacaattatccaccagtaaatgctattgaaagacactaa
7021 tcttcccacagcaacatggtagctactgctgccaatggtttttgtatatggatgtcaaca
7081 aatcactcagatgcctccaacaatttggaaaggccccagtaactacattttctagttaa
7141 ttatccaactgaggtttctagatatcttttcagagagattttctattttcattccatgaa
7201 gtcaatcttcttgctatgtgtacattcatagggatcatagatttaaaactcaaaagtatctt
7261 taggagtcactcagtcattgtttcattttatggaagaggaaacttggacttgaggagg
7321 ctaaatgacttacctaagatcatatggtagcaagtggcagtgtcagaacctaaacttggg
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74 **A E N R Q K**
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80 **L R A D E L R R E Y H E E Q R N E F E N**
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100 **F V E E Q N D**
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R27 *OmyGRP* *Oncorhynchus mykiss* from EST CX147126, CA341555, CX136522, CX151217, CX147127, CX136523

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241 GATGAGAGGAGGAGGGAGTACTATGACGAACAGAGGAACGAGTTTGAGAACTATGTGGAA
101 E E R D E Q D E R T R E K T E Q W R E F
301 GAGGAGCGCGATGAGCAGGATGAGAGGACACGGGAGAAGACAGAGCAGTGGCGTGAGTTC
121 H Y D G L Y P R Y P R G W ***
361 CACTATGATGGACTCTACCCCGTTATCCCGCGGTTGGTGA gcatgctccataggccaa
421 ggagatcagaacatagtgcaccagcctgtgattggcaggaccctgtgtcaataaagacac
481 ctagcctatcagacggacaaaaaagagcatgggagggtggccaaaccatcactcacctag
541 gagtaaaaaagggttcaagtacaaaacgattcaaatcaattttaaaaaggtaaatattatgt
601 aacgtttaaagactttgtgagtgtggcaggtcaagtttgaaaaggaggctgtcgtgatt
661 ggttgtgtctctatgcatgcttatttaactctcttattctttgtgcatgtatctgtgtggtg
721 tactgtttggtgtggtctgtgtatctttcacatctgtctgtatatcaaactgtgtggtct
781 tttctgtgtttgtaaccgtaatcaciaatgtgaaacctatactgtaatttaggaacacag
841 acaccaataaagacaataactacaatgtaaaaaaaaaaaaaaaaaaaaa

R28 OanGRP *Ornithorhynchus anatinus* from ultraContig42

1 M I W K Q I V F F S C L S A L V I L A
1 ATGATCTGGAAACAAATCGTCTTCTTTTCTGCCTCTCAGCTTTAGTGATCTTGGCCGgt
61 aagtgtgatcagcaataaaaacaaaaattcttcacagaagaccactagattttaaaca
121 gatagctggggttttctcaactgtggttagtgagggggaggggggtgtttgtgtgctac
181 gcaaatactattcaagaatattgtcttgaatagaattatggaattcagagggaaagggct
241 tggctcgggtggttttgaggcagaagcctgagtttacttggatgtgtgaggtggctcccc
301 gcatgatggttagggaaaaaaatcccagactagagaagtggtgattcttggaaagacatg
361 acttaaggggtttaccttgcgatggggatgttccctgaaataagccttgtctttgtgcc
20 V L Q D V E S A T V G S R Q V A
421 gtttttcccctagTTCTCCAGGACGTGGAAAGTGCTACTGTGGGCTCCAGGCAAGTGGCT
36 G D E N K E
481 GGGACGAGAACAAGGAAA gtaagtagagacttgagtttgggaggaggggaagccaccgt
541 cccaagctgtccttttaccctgatgctccccgggtggtgatcactctgtgtctctgc
42 S L K R K I F M Q E S D A S N F F K
601 tttcagGTCTGAAAAGGAAGATTTTCATGCAGGAATCTGATGCCTCCAACCTCTTCAAGA
60 K R G K R S P K S R D E I N
661 AGCGAGGCAAAACGGTCCCTAAGTCCCGAGATGAGATCAATggtgaggctggggagaggg
721 gctctggaggggtcgggcaggggattggagtcacactgagctccttgtgggcaaggatt
781 gtgtctaccaactcaatcatattgtaataataaactgtggtatttggttatggtatgtg
841 ctatgtgtcaaacattgtgttatgtgctggggcagatacaacataatcaagtcccacatg
901 gggcacaagttctaagtaagcttactgtgggcaggaacatgccaccaactctgttata
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1021 attgattgattgataggaggagcacaggtattgaaatccccattttgcagatgagagaac
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1441 aaaagagtattccccccaaatagatgaggacatgactgtgtctacactgtggacttaa
1501 aatttgagaaggtaatctgaaagaatgaactctgagtggtggctcaggtgggtgttcag
1561 aagcttgctagaaaaccaaagcatcccatcctggcatcttttggaaatggaaaaacagac
1621 attccacaaagggagtggtggtgggggtggggggagtattttccaccctgtccagatgact
1681 ggggccagcaagggatgcaacgcatcctcagaccctccttgcagacagaaacattcag
1741 tgtgtgaatcaaaccttgccaagatgctgtgggaggtacggggcaggctggtgaattgca
1801 tgttgatctcaccctttcttcttcccttccagcctgcccactccaacaggggtcccc
1861 atgggtaaaaagagctactgtatcatcggtctcgggttagcccatatgaacctggtataac
1921 taataatgattttttatggtatctgctaagtgttactatgggctaagcactgttctaa
1981 gcgctgggtaggtgcaagggatcagtttggatgcaattcccatccaaagtggggctta
2041 cagataggtaggagggattaagatctaactcctcattttacagatgaggaaactgaggca
2101 cagagaggttgagtgacttgcccagggtcacacagcagacaagtagcagagctgtccca
2161 ggcctgtgccctctctactcggccacactgattcccagttgtagtggttagtacgcagtg

2221 agcactcagcaaatgccactggttgatttgtaagcccgtactcaagagctgctgcctga
2281 acctaaatgtgagctttctgacctgctaacttgaagactgtccccctccaccagcttgc
2341 tttctccccatcccaaacctgctccttattgcgccatgttttcaaaacaaactcct
2401 ctagaatataagctcattatgggctggaaatatttctattttagtgttatatcgtactctc
2461 ccaagtgcttagtacagtgctctgcacacagtaagcactcaataaatacaactgaatgaa
2521 tgacccaaaataaaaagctgggagaaaacacatttctcatgtctcatagggacttttggga
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3061 ctgaggggaataaaactagggactctgagctaaagcagtagctttctattagaaccaggtc
3121 ccctgactcccagccccaggctcattccactaggccatagggcttctcacctctgctttt
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3541 caataaaggctcactgtgaagtctcagccccctgagctccttagaaatgttcttcaagc
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4381 tccagagtttagtacagtaacgagcacatagtaagcacttaacaaatgccataaaaaaaa
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4621 aagtgtgagggctgggttgaatgggagagaagtgaggtgaggtaggagggggcaaggtg
4681 agtaagtgtttaaagctgatggaatggagtttctgtttgatgtgaaggtggttgggcaa
4741 tgactggaggttctcgaggagtggggaagcaagaactaaatgtttttnnnnnnnnnnnnn
4801 nnn
4861 nnn
4921 nnn
4981 nnn
5041 ctagatctatgaaggaaaaatgggagcttacagctctacagggaaagtgttgatggttgt
5101 tgcctactgatgccaaccaggatgcactttcactgggttagaaaatggttagaatgtgtgg
5161 gaaggatataatccagaattcctttcctgctgccagcaggttttctcccatccccctagag

74 **V E T R**

5221 agttgaggtctttttccttccctcaaaacatcatgtgtttctttccacag**TGGAGACACG**

78 **Q Q L K A D E H R R E Y F E E Q R N E F**

5281 **GCAGCAGCTGAAAGCTGATGAGCACCGGAGAGAGTATTTTGAAGAACAGAGGAATGAATT**

98 **E N F V E E Q Q D**

5341 **TGAGAACTTTGTGGAGGAGCAACAAGATG**gtaagagccctgggaaaccatccctgccacc

5401 cagtcactataggccccctgggctatgtgctaataactgactgatggctcttctgctggtagctctc

5461 cacagtgcacctggctgcttctggcctgtcccaacctggatttaggcagttgggaatagg

5521 cttgtgtgaaatttatcaaaaataatgtcagtcctggctctgtcaagttcttctgtgtgag

5581 accttgggtaagtcacttcaactgctctgtgctacagtttctcatctgtaaaatggggat

5641 taaataaccatttattgagtagtcttctgtgtgcacagcactgtactaagatcttgggaga

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5821 tgtgactttgggcaaatcacttcacttctctgtactcagttacatcatctgtaaaatgg
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6241 attcaggggtgctttttgttttttaataataactgcatttgtattgtttagtcactttttg
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7381 ttgcagatgtgtttattcagctgtcttggccataactaagaataccctttgttt
7441 tctgaaactctgctccctgcaaatcccagcttgggcaaaacaaccctctagctcagtt
7501 cattcgaatgaacaagccttccccaaattgttttactggtttccagcctcagaactgg
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7681 taattaataatatgtgatttaaggatagtacataagtgttggaggaaaatcttaaat
7741 gtccaagatgcaggtgtacaagctccactcatgctgatttagccccctgtcctgattaaa
7801 aaggccaagcttggtagtcaacatcgagtttaggatcaccagaaatggccatggacttg
7861 gccaaatggcagcagaatactgttaggtaagacattaacattgacaagtgccctgacatt
7921 ttctctggagaagatgcaaatcacagttctggctccagactcttccctagggcaacgtca
7981 ttcccttgtatagctggagctcctgggagtttccaagaaggtaaaaataaaagagggaa
8041 gaaataaatacaagggttttagaaaggcctgtgtctctcccctggtgtgctgtggagaacg
8101 agcatcaggttgaacctgtcataaaggctaaaggagactttactcagggggaagaaagga
8161 cacttgtttgggcatatttgaaaattgctgacgggaggaaccaacaagacaacaggttt
8221 ttttgccgttctaaaccctgggagagatggggtacctataagaaatctggcagcaagt
8281 ctcagcatcatcattgtttttatctgtaagaacattgtggaatctttgaccaccctt
8341 tctagaaggggagcagtgagagagagcctaagtttggagcaaaataggagggggctc
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8461 tctgatagggaggagaaaactgagttctaaaattgtctccaaattcaagaagcagagtg
8521 gcagaaggggaaagagcacaggccttggagtcagaggacctgggttcattcattcattcat
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8641 tgctgtgtgaccttgggcaaatgcttcaacttctctgaaaaatgtgattgaaataaccat
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8761 actgggctagaggcagctgttctttatctcaaggaggaggggggtgaggaagctgggg
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8881 cataacccccagcattcagtcaggaataactttccaagtccccagaaagaaaactgag
8941 gaagctggacaggatctaaccagtgccaacctgtccaagaaggatgtccacaccaaca
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9121 agcactcaattaacatcactgattgctcaattgctcagtgacatactctcagtcagtt
9181 ctccggggaaagtcttcagctccctgatgtaaccttaatgtttcagtgctcagtttagag
9241 aatctgccagcagtgaccctacagaacggaaggggaggaagtggggggtgtctatcagtca

9301 aagtgtccgatcccatctccttaaacatggtgtccccctctctcccctccagAACAAAGAT
110 **E R N R E Q I E Q W R Q W H Y D G L N P**
9361 GAAAGGAACCGGAACAGATTGAACAGTGGCGCCAGTGGCACTATGATGGTCTCAACCCC
130 **P Y Q Y N R H H V *****
9421 CCGTACCAATAACAACCGCCATCATGTCTAA

R29 *OcuGRP* *Oryctolagus cuniculus* from scaffolds 176001, 174565

1 M T W R Q V L L L S C F S A V V L L S
1 ATGACTTGAGACAGGTTCTCTCTGTCTCTCAGCTGTGGTGCTCTGTCTAgt
61 gagtatgggagggccaaaggtggactgtggtcactgcataactaaagagtttagcttatacag
121 gtgagtctgctcaggtggcaccggtagaaggggtgtgcttattgttaagatgctatgctt
181 gagatatgagtgtgtgtgtgtgtgtgtgtgtgtaagacatgatataatacaggaaaat
241 agcaaagaaagaaaaataaaaaagaaaaactccccagctggcctggcggggttcaggtc
301 ttcagccggcatgtgagggactgagagtccttggccagtcctgaggccaagagggctg
361 tggagccctgcttgggtctggtccccgctgctgctgtaggagttcacctcaccttc
20 R L R E G T S A S V S S R Q A A R
421 atccccgagGGCTGCGGGAGGGCCACAGTGCCTGTGTGAGCAGCCGGCAGGCAGCAAGAG
37 D E A Q E
481 ACGAGGCTCAGGAAAGgtgagcagagggggcccgcccgcctaccggcgagccctggcaccctg
42 G V K P K I F M R E
541 tgctgatggtgatagcctctcttgggttttcagGTGTGAAGCCAAAGATTTTTATGCGGGA
52 S D A S N F L K K R G K R S P K S R E E
601 ATCAGATGCCCTCCAATTTCTCAAGAAACGTGGCAAGCGGTCCCCTAAATCCCGTGAAGA
72 V N
661 AGTCAACGgtaaggatgctggacagcctggcctttgctcatgccccctggttccttctct
721 tagccacagtgggcaggcgagcaggacacagtggggcagcgggggttcaaccaggcttgg
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901 ttaagatgcatgaaggagaaacacaagcaccgggtctagcaggacacaatgctacagtg
961 tgtgcttctggggctgctcgacagcgtacccttattcaagggcatgtccctcacaca
1021 cagggaagagtgacagggacggggtcctcgccacttctctcctgaccctcatttctc
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1321 ctacttggtaaaaaaaaaaaaaaaaaatgacaggcctgttttcaaatgatgggggaagaatag
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1681 agtcaaggggagccagggacagcctggtgatcacagaagtgcacaggaatgcatctgct
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1801 nnn
1861 nnn
1921 nnn
1981 nnn
2041 nnnnnnnnnnnnaacggggccccggcgggaaatcaaaaggccctcgggttcttctgtag
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2521 agataatctttttttttaaacatgaaaggtcctctacggctagtcattgcccataatgc
2581 tcatttttttttttaaaaaaggagtatttatttgaaagtcattttttttttta
2641 gggagagggagagagagagagggggagggggaggggggagggggagaggaagcag
2701 gagccagaactccatttgagctcccacatagggtgcatgggcctaagcacttgggtcat

2761 catctcccactgctttcccaggtacattagcaggggtgctggatcagaagtggagcagctg
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 2881 accatggtggcctctgagataatcccctaggtccttcaggtgtttaaactctgtatcctca
74 **A E N R Q K L**
 2941 gcaccctctttcttgggggcaaccctgactccttttcacagCGGAAAACAGGCAGAAGCTA
81 **R A D E L R K E Y Y E E Q R N E F E N F**
 3001 CGGGCTGATGAGCTGCGGAAAGAATATTATGAGGAACAAAGGAATGAATTCGAGAACTTT
101 **V E E Q N D**
 3061 GTGGAGGAACAAAATGATGgtaagagctcttcaccagtctcttcaggggaagggcgcttg
 3121 tgagaaaatcacatggtttgcctccacttcttcttcccaaattttgtttaaataatcatt
 3181 taaaataataatattagaggtaggacacacacacacacacacacacaccactttcatttt
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 3361 ctgcttcctttcaggggttagctggacactggactcacgagctggagctgggaatcaaacc
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 3481 tcccccatttaactgtaggagggaggtgtgggaagatctactttaattcatatccata
 3541 agagccttgaaaagcaaggagaaagccagagaaatggctatacagaacttgagaaggtgt
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 3721 tggctctgtgttttctgccaagcaatgaaactagggactttgatctggtaggctgtgctg
 3781 ggtagatttcaaactccttttttttttttaagatttattttattttatttgaaagtcaga
 3841 gttacacagagaaaggagcggcagagagaaagagagagaggttttccatccgctggttca
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 3961 cctttgggtctcccacgtgggtgcaggggcccaggacttggaccatcttctattgcttt
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 4081 atatggcttcaggccagggcgtaaccactgtgccatagcactggccccaaactcactt
 4141 tcaagtacattggattcacatctgtgtgggatctccaggacatcacactggacaagact
 4201 tcattcacctttcattttaattatagctaaactgagtgtgtaacaagcaaaaaccgaggc
 4261 ataggaaggacaaaaggaacacagaaggtgacaacaagtcggcagccctgggggtggagc
 4321 tcaggcatgtttgctcagcgaagtcctgcttttgaaagtcaggttgaccaagtgc
 4381 agaggnn
 4441 nnn
 4501 nnn
 4561 nnn
 4621 nnn
 4681 aaggcagaattattgagagagggggagagacagaacgacatcttcatcagctggttcac
 4741 tctcatatggctgtgatgatcaggactgggtcaggctgaagccaggagccaggaactcc
 4801 atcaggatctcccacatgggtggcagggacctaagtacttgggccatcttctgctgcttt
 4861 cccagggtgatgagcagggagctggattagaagtggagaagctgggacttgaactggtgc
 4921 agatatgggatgtcagtgctcacagggaaatgtctcaacttgcctgcacaacatgggctcctc
 4981 ctttttttaaatcaaatctttacgaatatagaccaatataggggagaaaactgcttatcc
 5041 cccatcactccaggatcctgaggttttctgtgacgtgtgttaaaggcatggtttgtgtc
 5101 tgcttttggtgactatgctgttgttttgggatttgggtgctcctagataactacctcgtga
 5161 gccagtgattgcctagggctcttcccccttttgcctgtgacgtgggcagaaacagcatgca
 5221 gggtaacaaaaccttggctcagttctaccggcagccaatcctgtgacctgtgtgtggtaat
 5281 ccacaaaacgagcctctcaactcattcccaggctcctgtgctgctgatattctgtgtc
 5341 tgtcacctagggctcgaggcatgtatggctcctgtcctgagggcccggcaatgcagg
 5401 ctgagggcagctgggggtggtggctgtgcttgggccagagtctctctgtcctcacaggt
107 **E Q E E R S R E A V E Q W**
 5461 gacttggctctttgctccacagAGCAGGAAGAGAGGAGCCGGGAGGCAGTGGAACAGTGGC
120 **R Q W H Y D G L Y P P Y L Y N R H H I *****
 5521 GGCAGTGGCATTATGACGGGCTGTATCCTCCCTACCTCTACAACCGCCACCACATCTGA

R30 OlaGRP1 *Oryzias latipes* from Chromosome 6 and EST AM153680,AM309031

1 ccttcatctctccctccttccctcctcacacctctcaacatttcagacacagagatgaag
1 **M S W T H A T P L A L L A V F V V L S**
 61 ATGTCCTGGACACACGCAACCCCCCTGGCCCTCCTTGCTGTGTTTGTGTACTCTCCTgt
 121 cagtctaataaacacaatcttctcttttgcacaaagcatgcatttcattatcagtgattt
20 **S S P E A D S A**

181 gggttcagatttcttaatcttctgcctaaaatgcagCGTCTCCAGAGGCCGACTCTGCAG
28 **A V A S S T G S V T D P Q**
241 CTGTGGCCAGCAGCACAGGCAGCGTTACGGATCCTCAGGgtgagctttgtttctgtttga
41 **G P L K R**
301 gtttttaaacccgctcaaggttctgagctgaaccctttcctctgcagGTCCGCTGAAGAG
46 **I F M K E A D A A N F F R R R S R R A V**
361 GATCTTCATGAAAGAGGCAGACGCTGCAAACCTTCTTCAGGAGGCCGAGCAGACGGGCTGT
66 **K S Q D E L D**
421 GAAGTCTCAGGATGAGCTTGACGgtgagtttgtggatactgctctgtgcggtaacgtgca
481 ggctgtagaaacttttatgtgcctttttatgataaaaaataaagctgttcagttctgaata
541 aaaaagtgtaatcagtgcaaaattattgactttaaggaaactaccagtaaaaatgtatta
601 agtcaaaatgtgttaggattgtttcactgggtgttcgatcacctgtagtagctgattcaa
661 catacaaaaagtcagacataatagttctggtattgtttagaataaatcattggatctttg
721 tacatagttcagtggaactttgccggatatttttagacatttttctcttagttttgacctt
781 gtcttggtttatattatcgatttatacatttttattttgtctctacatctttgatctttt
841 gttcctatatattatattttttttcaggaataaaaagaaaatatttaccacttaaaata
901 aaaatcttttccacagtttcaggtttattgtggaattcttatgtaataataattaaaagc
961 tgtggagggatcaagcattgctacaaaaaaagttttaagataaattaatcaagcaa
1021 attgtaaagtaaaacaaagatcaaaaagactaagagttaagtacaatctgctgtttgtt
1081 tttggatttatccttttagtgacacaaatgtttcagatattgtacaatagggcatattaa
1141 atgcttttctatcctgaatgaatccttttacctgttttgtcacaattatttaatgtaaaa
1201 gatgcaaagttgtgctaaaataatagcaaccaagtagatacatatgtctttggtaattc
1261 tgctattagctaaagaaataacctgcagagttcatctgctttggaccaaacatgtccgtg
1321 taaccacagcagccgccagctcttcattattcttgactcggcctggccaggaaatacctc
1381 atacctgttttcttgctggaggcagcagcaggagccacaggccaagatggatctcagctc
1441 acatcctgtagcacatacaagcatttctcaaactgtccaacatgggtgactgaagaacac
1501 taacgtgctcttccagtggaacgtgtgagcacactgtgctcctttgaatcagaattat
1561 gcaacgcatgtgtatgtggcaacaaaactcagtgctgctgctgctgaggaaaccagca
1621 gagaacagatagggatggatgaagtgggtgagcagttggatgttgaatgtggaatg
1681 tgccaatatccaagcagacgggggtcagaggaaaaaaaagaaaaagaaaaagtgagaca
1741 cacaagctttcctctgcagctcctgctgaggtgctgacacgaaaggatgacctcct
1801 tatgaaagaagatttatcaaatggatcagctgctcagtgggcggtttaaaactattt
1861 gaagcaacaactttaaaagtacgcttctgaatcaaagatttagttagttaatgctac
1921 ctgcagaacgcagaaactctgaaatattgatggtaccaagctgatctaaaagtgaata
1981 attccttgaaacagaaagtcttttttaaggatttaactgggtgtgcaaagtttgtaaca
2041 aataacttaaaatctaattctgatttgaaaagtttcaactccaacttgatccttttaac
2101 ttgtcgttttcaacctaaactcccagcatgcacctcagcatccggtgcatgcataaacat
2161 aacctggaaaaggtcacagggcgcgaccttctttctaaaggttagagttgcagctttaa
2221 acctttcatgcctcaacttttctgctgctgagggtgaaatgagttttactgccgtcatgtaa
2281 ggagcaatacattctagattcaaggagtttttacctggttttttttgaacattttgaaa
2341 catttccattaatctgttgctatttttctaaagccagcatcaatattcatctgaaatatt
2401 accgccgtttaagatgttgcttaaatgtcagttggtacattctgctttgaattcaaagt
2461 agtttaaatctatcacagttaaaaggaaaaaagtagcctgactcaggtctgtgtcaca
2521 gtttaagtttcatattctgctgacagttcttctctctctttttggagcctgtgtgtttt
2581 aagtaaaaataaataagtttagtttaaggaaatgtgaaactttgatgtagcagtaaaata
2641 aatctggcctgtgtgctgttctcagtgtaggaatcagatttgataggaagaatcca
2701 ttaatcagatcttctgaggggagcatgaaaatgacttcattttgcaatgatcttctggt
73 **A E Q R Q V I A A D E R K R E F H**
2761 tgtgtgtgcagCTGAGCAGAGGCAGGTTATAGCTGCTGATGAGCGGAAGAGAGAATTTCA
90 **E E K R N E F E S Y A E E D N D**
2821 TGAGGAGAAGAGGAACGAGTTTGTAGAGCTACGCCGAGGAGGATAACGACGgtccgtgaag
2881 gtttctatgtgatgcagctgattcagcaggagagctaactcatgctcctctgatctcct
106 **E V N E R S R E S T E Q W R E F Q Y D**
2941 cagAGGTAAACGAGAGAAGCAGAGAGAGTACGGAACAGTGGAGAGAGTTCCAGTACGACG
125 **G V H P P H E D N R H S N *****
3001 GCGTGCATCCACCCACGAGGACAACCGCCACTCCAAGTGAcaccccgagcacagatgc
3061 agggagacggggacagaactcaagatgcaaaagtagatatttaagcaaatatatacaactg
3121 ttttccattttaagcctgtaaaaaaattaaacagacttctaatatcatagattaaccaa
3181 atttgtgacaaaatacataagcattttgttataagatcagggataaatgacagcagggcat
3241 ggtttaattctcacttttaaacgggaagatcacaatcactttaaaatgttttatattttt
3301 aaatatgagctaagttacatttataaggaaacccaaaaaaagtaaaaaaaaaaaaaaagcat

3361 aaacttaaacactttttttaataaaacttaaaactaaatcttttattttatctttttc

R31 OlaGRP2 *Oryzias latipes* from Chromosome 23 and EST BJ896397, BJ882524

1 **M S W T R V L V L P L V S I L**
1 gtccatctctaaaaATGTCTTGGACTCGAGTTCGGTGCTGCCTCTGGTCTCCATCCTCC
16 L I L T
61 TCATCCTCACCTgtaagtaggaaggttaagatcttccagttgtgcaagaaaaagctttga
121 aaagaaaaacagctgacagagtaaatggatgaagaagaagaacatttgtacgatttgggtt
181 tgaattctttgattcagggaaatgaactttgattcaggatttcccttttaattagcatt
241 tttgtgttctttttaaatcctctctaagggtatataaatcaaatgtgtgtaaacatgg
301 catcaccagcgtggtgaagcactattagtgtaacaagacaagcatttaagtgcctttca
361 aaagttaagattagtttgagacttaaaaaaatgaaagaaaaagatcattttaacttgaa
421 gttcattttaaatcgactcctgctactgagactttcagaaagtttgcctcctcttagtc
481 tcagtttaattttataggttgaatatattttacatttttattcttgaagaaagctttatga
541 ggcattaaagactgtgtgagtattttgacattagatctgttcctgtatttcagtctatag
601 ggttaaaattccattagaatagaatttatattcaggaaaatagaaatcttagtgtcagat
661 gtgtctgatgagctgacgtagaggatgaaatgtgttattgcacagctgcaataacgcgtt
721 gtggactttttacatctgttaagctgtccttaattgttcttaaacacaaattatTTTTT
781 taaccacgtcaggtcacgggctccgtacatttcttttattggatgatttattggattta
841 ttctcttcataaaaaatagctggttcgtattgagccgaggaagaatatcaaatgtatagcg
901 attcaaaaaaacatcaaggtagatgctaaagttaggctagaaaatagacacgagacacac
961 actctcacactgatctaactttactcataaatgaagtcacacgttttcccttctggac
1021 aaaaatctccatgactttagcgtaaaagtcgtttagttttagaatctccgtaaaagatg
1081 cgctgggtccaacatgtgtcgtcctttaattattgctttatattctgattaaatgtccaac
1141 tgtaagacattttatgacacagtttttcagagctaaacataaagtaaggactcctattg
1201 aactttattagcaacaactgaacaacaacaggagctctacattgagtactgctgtct
1261 taccttcttcagtgacgctcatggagaacgagttattttttaccatgtcaggtca
1321 cgggctccatacagttccctttattgggtggatggtacaaaaaggggggcatactgccacc
1381 tgctgtaagatcggggaactcaagggggaataaaaaataagaatcttgggtacaacttgtc
1441 tcatatgcatagacttctgatggtttcaacggtaaggcagcagctgtcgataaagtcaa
1501 gactttaacaatatctactcctgtttcttggcataaacagtcagatactgaagtttttta
1561 aatgaactgttgaagaagttaggtttgataaatcgatctgaacaatatttgatgaatag
1621 aaaataaaaaacaagagaaaaaaaacaaatttaagaaaataagaattgtcagcaaccgttt
20 **L T S A V R S A T V R D D A K**
1681 gaacgtctcgcgctcagTGACCAGCGCGGTGAGGAGCGCAACTGTCCGGGACGACGCCAA
35 P A D A K
1741 ACCGGCCGATGCAAAAAGgtgaggctaaactcaaccgttcatggcgtcatctccaccagct
40 **D A A R R V**
1801 gctgtgtttcagaggcgttaaccatgtgacctttgacctttagACGCAGCAGCAGGGGT
46 F V A G S E A S N F F K R R S R R S P K
1861 GTTCGTGGCCGGGTCGAGGCCCTCAAACCTTCTTCAAACGACGCAGCCGTCGGTCACCTAA
66 Y Y A E L V
1921 GTACTACGCAGAGCTCGTCTGgtaagctgtgtcctctgcaaaaaaaagttccatttctga
1981 ccaaaagctggaagccgcttgatccaaactcgactcagaatcaaagtcttctcagctgctg
2041 gtttggcgtgttcaacatttctgtggatttctgttggcctcgcagtggaaggcagatgtg
2101 gtctagatacgggtttcgtctcaaagaccactccgaagaaaatgtgggtttttcacaggt
2161 tctttagcatttttcatttacaagaaaattaaacttaaattggcattttctcatgtta
2221 ttttaattcaaatggttgtaaaatcaggagaaacgaaaaatgctgctggaaaaaagatt
2281 gtacttgggatgttaaaaatagctgggcccagcaagctccgcccatttggatgcat
2341 ccaactcagcaaggggggaggggaagaaggagcggggttgctctgtcccgccacaactca
2401 acaggtgattttcttataaatcctgccactctgcagaaactgtgtcctagaaaaagctag
2461 tttggtttttagctaatcataaataaaaagtgggacttttaggaacttcggtttgtaggtggg
2521 ggaaaaaaatggaggtttccttgtggttcatttggataaaaaccaactgcaagctgggaa
2581 aatcaggaactccattcccttgtatggtatgtggtgtaaggggaggggattggagaggaa
2641 aggaaaaaaataagggggtgtggttaggaacgggttagggatgggagtgatagcgcga
2701 tgctaacaggacctggtggtcccttgagtgcacagtggttgcggtgggaatccggttc
2761 cctttagtgtatttgggtgtccttgtaccaaatacggctaattagcttgaataggaa
2821 atagtcaagcatctgcaaaaaccagtttacagaagcttatattttataccaactttacc
2881 agaacattgtttttaataagttacacctaataaacagaataaactaaaatttgaatgcc

2941 ttggaggcagcgttgacgatcctggcgcttgctggactttcttggacgcctgaagccttc
3001 ttaacaaaaactgaacctctgtccttgaagatcctataaaattggtgatttaggtgcaatc
3061 ttagttgccccaatatcctcgctgtggagccatttttaatgcaacgcaatgatggcaac
3121 aaggatttccagcatcactctcctgttgtcaagtctgccattctaacgccctcagcctga
3181 catcatgatctccggctcgtcaacattctcacctgagttaacgagacgatggctgaaagg
3241 atctcagcaggtcctttaacgacagcaatgagcaacagcgacagcaatttttcaggatta
3301 cgttaacttttatggcaaaagcggactatgcaattcatcagatcactcttcataaactc
3361 tggagtaaatgcaaatgtctattagcagcaatttccaatatttatgtcattctcataatg
3421 tttggccacgactacatgtgaggtttttctcctggatctgggttctcctcctctgcaaaa
3481 gacatgcttcataggttcattggttactctaaattgcttatgcatgtgtgacctgcagc
3541 aagtcaggggtgatcctgccttcaccaatggtagctgggataggctccagcaacctc
3601 tgaccctaaaaaggattcaaaagcagatggaacattttccccacacacactgaattatg
3661 ggcacttgttttgtcatctgtttgtcttcttagttgagcaaaaccaaagtgagtttagta
3721 aatgctgctcatccacctgcctcttcttctcctgtttcgttgacgctgtatTTTTTTTTT
72 A E Q G M K R A A S E R R R
3781 ctggactttcgtcaaaaagCGGAACAAGGGATGAAGCGGGCCGCCAGCGAGCGAAGGAGGG
86 E F N E E Q R N E Y E T Y A E E D R D
3841 AGTTCAACGAGGAGCAGAGGAACGAGTATGAGACGTACGCCGAGGAGGACCGTGATGgta
3901 agaaccggagcggttttggttccggctcagcttcatgtccggcaaacgccacactgtcac
3961 tgagcgtctcaggttctgcttagagaagctttgtcaaaagaaaaaagaacaaatcggc
4021 gggagccaacgttaaaatcaatccacaaaacaaaccactcaaccaatgagcatcatttat
4081 aaaggacttcttgaagggtcaaagctgccgaggtgctgaacaggttagcagaatagaacaa
4141 tagaaataaaaaactaaatgataagagactctaaaagaaactgtgacaacaaaaccata
4201 aaagggttttaggcttttatcgactaaatccactgaggttttgccgcagcaataactctga
4261 ctggagtaagaagtgatttaacaaacaaactaaagtattttacctgagtacttctcct
4321 ctttacccaaaaaggaagagtgaagccacatgaaaaacacatcctccttctacttg
4381 gcgtcactcaataaaccaacagaaaatggtccttcaggaaaacatttgaatgaaaaacat
4441 tcccaagatcatccaggatattgactgtaaatgagaactggactgagcactcctccagg
4501 aaacaggaagtatctgcaaaatccatgtatagagaattaacatcgccatttgtgctgc
4561 acacatggagagcaaaacgtccaagaacttaaggataaaaacaaattaaaagagactag
4621 aaccaggctgatgcttaaacgattaaatggaggaacaattcttttttaactctccaag
4681 agcgtgacctctgtactcgccggtggcaactggttccacagtttaggagccgacacggca
4741 aacttagatgtggatctgggaacctgaacacaagctggtcgatggaacgtaaggacttt
4801 agggggaatgtcttaaaagcagactggagaggtagaagatgacgtacctgccaggtact
4861 taaaagtaaggaccagaatctgaataaaaccaaatactgactgttactcctcattc
4921 tatcggtcagaagaactgttcttttaaccaggtttttaataatcctctttttttggtt
4981 cccaattttcttattgcaagttattcaaatctttaaactgaccaatcagacgcctaac
5041 aaaaatctgtggcgtcacgtcaagcatttaaaatgattaataataataatggattag
5101 atttatctgcgcttttcaagacacccaagcgcttacagtgtgtccattattcattcact
5161 cctcattcatacttgggtgacggtgagctatggtttgaagccacagctgccctggggcaga
5221 ctgacagaggcgtggctgccagttcgcgctacggccctctgaccatcacgggatcat
5281 tcatgtgcatccagtggagccacactggaggcaaggagggtgaagtgtcttgccaagga
5341 cacaacgacattttggctggtgggagcggggatcgaaccgccaaccttcggtcattgga
5401 cgaccactcaaccatctgagccactgtcgccattgacagatgattgacagattctccc
5461 gagatcgccgtttagtggtaggggtgtggacttccgacagctgattggagacggtgggtg
5521 ctatagaaacaatgattcagagtgactcagaccaatcactgctgactgacaacatggcga
5581 catccgtatcagaaaagaattcatttgggtggagctggaagtaagccattttctacggat
5641 gacatcacactgaattttccggttgcctacagagtcgatgatccaacgttggttcatcg
5701 actctataggacaaccggacaacgtcacactgacattgaccacaaagaagggtggaggaa
5761 gcttcgtctctccagagcctgtctcatctctggtttccatggcgatcgaagctccagga
5821 aacgccacattttcaagaaacaattgcagatttttagggcacttctctgtaggtttttct
5881 gtgtaaaactggtcgacttctaagagaaaatgctttgaatcctcaattcctgaggaatt
5941 gaatgctcctcttttgcctgaaacagccaaaggaatcaggggaggcgtgagggacaatct
6001 ttcttacagcagaacgatggaatcagaaaaggaagcacacaaaaagaagggaacagac
6061 ggatgggctaaagtcaaggaagaaaaacacagcttggaggactctggatgcaaccgatg
6121 gagccaaatcccgtttgttggcggtaacaccagcggacgcctcaccagaaacctgacatt
6181 tactggactgctcatgcaaccaagcggcccagcagagagctcacactgacggatccagtt
6241 ttcgtttgggtcttgggtgaacctcagtggtcaccaagaccgccaatcttccctgcagc
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6361 cacaaggatgtgacttagtttcaaaatgcactcaggacgtttggtagggcttgaataaa
6421 agcagaaatctattccagctacactttttatggccacaaacaaaaataaaagtcaaaaa

6481 tagagagctagcactgcagaaatgccactattatctttgaagaccactgggatcatc
6541 gtttgatagaaatgttactctgtcttttcattataactagaaagagccgctttccagaa
6601 gaaaatgcagggtgaatgctgtatcctgaataaaaatgaaactaaaggggaataactgg
6661 caaaaataaaaattaaagaaagaaatgatcaaagttgaccataaataaagtgaaaacagc
6721 acaataacaagacatgtttgtcaaaaatgccagagccgggtatcgaaccagcgaccttct
6781 acaccaaggattccccatggatttcaatggaggcagaaatcctggaatatctcgaaaagt
6841 tcaaggattttagaggagcaaaagtaacagctggaaaaagctgaaagagctgaacatctga
6901 atagttgaaataacagagattgtaggagttaagcatcaaaaaatggaggaaggtactaga
6961 atgatccatgatcataagattgcaggttcgattcccgccttgcacacccatgagtcgaag
7021 tgccttgggcaagacactgaacccaccttgcctctgggtggtaggcgggcccctgtgtt
7081 tggcagcggagccgaccagctgtgtaatgtgtgagtgatgtaatgtgtgtgactgtgtgt
7141 gtgactgggtgaatgtgtgtgtgactgtaaacgctttgtcctttaggaagaaaggcgc
7201 tatacaagtatacgccatttaccatttaccagaataaagacagagaaacgggaaaacgat
7261 ggatttatagcatcaacccatcgtgttttcagccaaaattaataaagacgaagaacgcc
7321 gttgtgggaggactgttgacacggaggaagccggacttcatttcccatcatacctttgt
7381 tttcaccgcatcctcaaaaccaatggaaggggggaaaaaagataaaccacaacaacaaa
7441 ctttagtcttttaactttcaaaaccttccggtttccatcttttagacatccactagtttc
7501 taactaccggtacctccatctgtgccttgtggccaatttgtactctagaaaaagccaga
7561 gatgacacttaataaaaggcagaaagtgtgtttcttggctttaactttgtgagtggtt
7621 tcaaacattaaccaggcttaggtgcccgaagacaaactgtaacaaattttgacaaaa
7681 agccagattggaaatcgccagtgatccatggagatactggactaaaattcagaggaaa
7741 aacttcaaaaataaatgctagaaaattattgtttgccactgcaaaaagcaacgtataaagc
7801 attttagcacatgtagcaaatccaactgaagatgtagaataattggaataaaactac
105 E I N E R S R E M N
7861 ttttagtgaaaggatttttttttctccacagAGATAAACGAGAGATCGAGGGAGATGAAC
115 E Q L R E Y H Y D G L Y P R F H W F H ***
7921 GAGCAGTGGCGGAATATCACTACGACGGCCTCTACCCTCGTTTCCACTGGTTCCACTGA
7981 gcatgctcagtagacagcccaataatgtgtccattaccttcaccgtcaattgggtgtttt
8041 tgcagtcagctcaagtttctgacttttatccaaattttccagactgttttctggta
8101 ataataattttaaacataatgaaatgtgcaggaactgtaacgagtgtttaaggagcagt
8161 tttttaggttagtgcatgccggttctagtttttgtgtatataaagtgatgccaacgat
8221 cta

R32 OmoGRP *Osmerus mordax* from EST EL530439, EL527008, EL530440, EL527009

1 M S W T H A A V L L L T V
1 ggggggagacacagatctcaagATGTCCTGGACACATGCAGCTGTGCTCCTGCTCACCGT
14 L L A L S L S H E A D S V A V P D D K D
61 CTGCTGGCACTGTCTTGTCTCAGGAGCAGACAGTGTAGCAGTGCCTGATGACAAGGAC
34 T T K A L D P Q G P L R R I F M P E E D
121 ACCACCAAAGCCTGGATCCACAAGGTCCACTGAGGAGGATCTTCATGCCAGAGGAAGAC
54 A A N F F R R R R R R A V K S Q D E I N
181 GCTGCCAACTTCTTCCGACGACGCAGAAGAAGAGCTGTAAAGTCCCAGGATGAGATCAAT
74 A E Q R Q R L A A D E R K R E Y H E E Q
241 GCCGAACAGAGGCAGAGGCTTGCAGCTGATGAGAGGAAGAGAGAGTATCATGAAGAGCAG
94 R N E F E G Y A E E E H D E Q D E R T R
301 AGGAACGAGTTTGAAGGCTATGCTGAGGAAGAGCATGATGAACAAGATGAAAGGACCCGG
114 E S T E Q W R Q F H Y D G M D P S K ***
361 GAGAGTACTGAGCAGTGGAGACAATCCACTATGATGGGATGGATCCCTCCAAGTAGtac
421 aaccgccagtcctctgagcctagagcaccgcccctgctggagacttgggtacaacagaa
481 aggaaagaggggaggaagagcaagtcttctgagataaaaactcttagtttccagagcg
541 atccttttttgacaaaacggtatgcaaaaaaagacaaaatagctatttctgtgttcat
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R33 *OgaGRP Otolemur garnettii* from gnl_ti_1113782411, gnl_ti_1078143903,
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20 V L R E G T G A S V G T R Q A A G E
 421 ttccacagTGTCCGGGAGGGGACTGGTGCATCAGTGGGCACCAGGCAGGCAGGCGCAGGAGA
38 E P Q A
 481 GGAGCCCCAGGCTGgtgagtggtgggggtgggggctctctgggagggacagcaggtgtgg
 541 ccagtggtccagaagccctagcagctccctcttgatgtgaccagcctctctgcctctct
42 G V K Q K I F M Q E S D A S N F L
 601 cgggtttcagGTGTGAAACAGAAGATTTTCATGCAGGAATCCGATGCCTCGAATTTCCCTC
59 K K R G K R S P K S R
 661 AAGAAGCGTGGCAAGCGGTCCCCCAAATCCCGGnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
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R Q W H Y D G L Y P S Y L Y N R H H I ***
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R34 *PtrGRP Pan troglodytes* from Chromosome 10

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20 M L R
421 gtctgggctcccctctgatgctgcagcctcactctgtgcccttgtcctgcagTGCTGAGA
23 E G T S A S V G T M Q M A G E E A S E
481 GAGGGAACCAGTGCATCTGTGGGCACCATGCAGATGGCGGGAGAAGAGGCGAGTGAAGgt
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42 D A K Q K I F
601 cccccacactgctggtgacaggcctctcctgggtttcagATGCAAAACAGAAGATTTTCA
49 M Q E S D A S N F L K R R G K R S P K S
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69 R D E V N
721 GAGATGAGGTCAATGgttaaggatgctggagggacccccaccgtccatcaccacctctgct
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 11161 gatctcactctgtcgccaggctggagtgagtgagtgatctcagctcactgcatcctc
 11221 cacctcccaggttcaagtgattctcatactcagcctcctgagtagctgggattacaggt
 11281 gtgtgtcaccatgcctggctaatttttgtatttttttagtagagacagggtttcaccatgt
 11341 tggccaagttagtctagaattcctgacctgggtgatcagccagcctcagcctccaaag
 11401 tgctgggattataggcatgagccatcccgccggccaatcacagcactttgggaggctga
 11461 gacaggaggattgcttgagactaggagttggagaccagcctggacaatacagtgaattc
 11521 cacctccataaaaaaattaaaaaattagccaggcgtgggtggcaaaggaggctgaagtggg
 11581 aggattgctgagcctgggaggtgaagctgcggtgagtcctgatcacgccactgcact
 11641 ccagcctgggtgacagactgagaccctgtctcaaaacaaaaacaaacaagaagaagaa
 11701 aaaaaagaaaaattaattcagaacagtatagaggaaaaaacctccaagtcgacaatgat
 11761 tccttcatgttttcaaggcatggtttgtagtccttatttttcttgcattccttccag
 11821 tagtccattcctgctactgtgttacttttcttcttcttcttcttcttcttcttcttctt
 11881 tgaaacagggctgcataagcctctgcctcctacactggctgggcaggcagaagagcctg
 11941 agatgcccgccctggtctacacctgctgtgacctcgccatctgggctgacttata
 12001 cacaaggcctgtcagctcacatactctggatcctcaccagtctggccttctctcaccag
 12061 ggctcacaacactctcagtgaggtcaccacagggcaggggttcggctgatggctgctg
 12121 ggctcagtgagcaggtcagagggccccctcctaacaggtggctttgtcttctcccag
107 E Q E E R S R E A V E Q W R Q W H Y D G
 12181 **AGCAGGAAGAGAGGAGCCGGGAGGCTGTGGAGCAGTGGCGCCAGTGGCACTATGACGGCC**
127 L H P S Y L Y N R H H T ***
 12241 **TGCACCCATCCTATCTCTACAACCGCCACCACACCTGA**

R35 PmaGRP *Petromyzon marinus* from Contigs 4340, 27687 and EST gnl_ti_1229580355

1 acattcggtggtttggagggaccagcaggagcc**M T R T A L S L L**
10 **V L V L F S** **ATGACTCGCACAGCGCTCTCTCTGCT**
 61 **CGTCCTTGIGCTCTTCTCCT**gtaagtctccccctcacggaggcccagcaccactcacccc
 121 tgcagctcaagcgccacattgggggtgccacggttggtgccacgggtggcgagacgtttacta
 181 ccttgogtggatatacaggagttgggtgggttcgatccagatcctgacgcctgtatattgt
 241 agtttgcatgtctctccgttctgctggtgggtgattatccggatcctccggtttttccat
 301 ccacattttagaaacgtgcttttagagattttggctgctataaattcccacatgataag
 361 ccacttctgtgatatgtcacttggctcggaagcttatgaaaaggagcttcatagctca
 421 gtgggcttatctggtaaactaaaaatacagtagtttagttttacattgtctggtttattg
 481 gtgaacttaataggaatgtgagctacgcatgccgacaggtctgagttgagctatagatga
 541 aggaaaagcttctaaggaaagtctatgggttttgggttacaatgagtacagttcaatagt
 601 tagtacatttacgtatataatgagcatttgcttatgggttatcaatgatgcaattgcaaat
 661 taacatgcatttttgcattatgcatatttttccaggcctcggcttgtaaatattttaaatgc
 721 gcgaaatggttataaataagatacatatttacaatatagtggtgcaataacatgggtcatg
 781 tttattttgaattgtattcaaatgaataaaatagtgctgtatatagtttgtataatttgt
 841 ggtagcgttatcacactgtgtagtcatacttgcagattcaattaaattcaatagtttgt
 901 atttctaccaatcacagtcaaaaatggtacgtagtgttcatcaaaatagcaaaatttta
 961 acaaaagctggaactaccctaaactcaatatttggataaaaactcaattaccagttgtgta
 1021 tagtgattttctttgttactgacaatatactttacatattatttgggttttagatattaga
 1081 atatttagactggaggaatccgatgagctataaagctctttttcacagatcagaggaga
 1141 tacatttgctttattttagaatttgaattcatgattgaactcaatgcaccagatgacact
 1201 cagttataactaactttaaggctccctaacaatgggttctgtatcggatggggcagagtagc
 1261 ccctccaacagagccaatggtttgatgacaagttcactgtaaaactgtcatctggacaaa
 1321 ttggcatgagatttttaagaaaaaatcgtcttaaaacttaactaaaatgctcattactgta
 1381 cattactgtctaaatgcgaaaatgggcgaaacaatggataactaataatcctgtcttctg

1441 tgggaaagcacgctcaccttgtcgtttcatacttatggttggtactttgtgtattcttagtt
1501 agtgtatgtacagcaacacaagatgttttcgtaaattgtatctgagaacaaaaggcgcgc
1561 atttatatatgccggtgagtcggtacaacatccaatgggaattaactgcagaaattgtta
1621 agaggagctgaataaagaaggctgaaaagttgggctcaaagtaaatgagttgcagtcacg
1681 aaagatttaaatcgaaatttaaatgagttgcggtcatcaagtgtgatcaacaactctcag
1741 acggagacagctgctaaacgcaggtcagttattcaaagtggacagagatgaaactgattt
1801 cataatcaggtggacaaccgtgggctggagtgctttgtaaagcttgatgatgaaaagcaa
1861 tgtgcctaaggaatacaattataatataattatcagcgaatattagccgctctgacacggtg
1921 cctcgtaaacggggacatggacaaaagaaaatggaacagcgcacaaatcaagagatgcatt
1981 cttagaattgtattgggagtggaaccatacatggaagacataactgcatgctagaga
2041 cttcatattgactcttgagaaaggtgggctagagcaggttatcatcgcaagacaggatga
2101 tggtcggtggttgagaataacaatggggtggcagacaagaggggaatgctgtctcagagg
2161 acgcttgccatgatggagggatgacatcggctcgtgtgcacacgtcccgggtggattgcc
2221 acatcgcagaacccccatgtgggatgatggcagcgccttggggagacctcaatccagcagt
2281 gaatgaatcgtggttgatgacgattatccaacggggtggagtggcgcttagattgcttcg
2341 ttcactgcactacgaactcggcaacctcaaaatgtgattcctgaccaggtcattggcact
2401 cctccatttcaccaatgtgcaatgaccactgtggcgatttatcactcatcaaacactcaa
2461 gagtgcacttttgcgatggacaaaggctgtaattcaaatcaatgccctatgctatagtg
2521 aaagggtttgcttaggcgatctgtgtgtgttcacaattccttgtttttgagcgaatcca
2581 ctccggttattgttgacttgaccggacactgcctgaaatggtatgccacggttttgctta

16 C I Q E G R A A T L M K T I Q

2641 acagGCATCCAGGAGGGCAGAGCAGCTACACTCATGAAGACAATTCAAGgtaacgcaact
2701 tgcagcaccaccaccgcccgaaccttaacaccagacacttacgaaaacctcacagccga
2761 ggtagcaactccgtgactttctgtatccgtattaagggatgctccggaaagacggacccc
2821 caaatgtcatggggtcggaaatggatcacatcaccacacacgcgcgctctccacgact
2881 taaccttgaaacacaagagcaaatgtcatgggtgcgcttgacgggtggttcctgtcaag
2941 tcacagctctcccgtataatgaattacgggaagccaacaggaatgctcactctttaa
3001 aacacgcgagtgaaactcgtgaacacacataaaaaaatcgggtaaaagatgtaaccattag
3061 aggggaaagtttcatagttcatagttccatttatttggatagccctgtgagcattcggc
3121 tcttgaatcgggtgcaacaaacaaaaacaaaaacaaaaacatgaacaagaaaaac
3181 atctttaagtgattatgtgacagtgcaaacagaaaatccaggaaaaaacatcaaaata
3241 ttctgaaatagcactgtacaccaatgctgtgtgcaaaaatcccagtgggatgcaagtca
3301 gacaacaacaacaaccacaagacaactaagattaaggccatcagtctaacttcgtactac
3361 aataaacaacaaacatggccaaacaaaaaacttttcgaaatcaccaaaataaagccataa
3421 atgcaatgtaacagtgatcatagggactgtgaccgaattttaacaataactatataatc
3481 ttagctctttcggtaaaagtcaggtgaaaggaacaataaaaataaaaatataaaaac
3541 aatacaaaattctcacgccttttcgaccataatgcaaacggtcgtcatcaggtgtgaaaa
3601 ccaacggcaagaaacatttgaaagaagtgtcggtttgactttatttttaaacggtg
3661 tattttatttttttttaaaaaagctttcaatcaaaataactacataaataacatgtaaca
3721 ccaaaccttagagccatagctggctgcatgagtcactcaacaacaggagcatcagccgga
3781 gtatcacatttttcaatgcaccttaagatcagcacactaaatcaaaatacagttaatac
3841 tttgcagcggatcatccggagcgaacatttgattttatgtgactggaagagaacaggtt
3901 tagactgagcatatgccgtgggtatggacacatagggatgactgatttgattgtagtca
3961 atgggtccaatatctatcatttgctgacaaatggctatgacaaccattacatcaatgct
4021 aatagtaagttactgtgtgcccagactcaaacatcggacatgaaggttaaccacaactaac
4081 actgctatcaatatttaggtatcctttatgcaagagaaaatgcatactttattaggctct
4141 cgcctgaatatgggcacatacttaatttataatgcaatgacattaaaaataaaagctcctt
4201 aatggaactggtcaaacatccaattcagactctccagaaaatgtatttactcaacgag
4261 atagtcctgaaaaataaattgcggttatgactattcaagcagtcctcgactaaagaacggg
4321 ttacgcttccttaggccctttcgcaagtcgatttgcttctatctcggaactcaatagtat
4381 ttgctcagttagcgttataaaatgtgatacgggttcaacaaaaaatggaagcattgttaa
4441 attaaataacaataaataatacatttgcatgtgatactataaactgtattataaatccag
4501 taaaacatcaaaataaacacgaaaataaaataaaatgctattttcacttacctcgagtcg
4561 aacgggttaactgttgtgtgcatcacatgggatgctgggactctcgacaactcacggaag
4621 atcgctccgctcgaacaaaatagtcccgcggttcagttcaaaagtacaaccaaacgctcgc
4681 aactcggatggttaaaaataatcttacggcagtttgttcgaaagtgcgaatggttcgtaa

31 D

4741 gtcatgcggttcgatatctcggggactgcctgcactatggtttttatccacctgcttgcaA

32 P N A V F V R E E T A A S F L R P R S

4801 TCCGAATGCGGTGTTTGTGCGAGAGGAGACAGCAGCCAGCTTCCTCCGTCCCCGCCGCTC

52 V K L P R E T I

4861 GGTCAAGCTGCCGCGTGAAACCATCGgtgagtgagcagccttgcgatccatcataacc
4921 tcgctctaacagcagcctacaatgtgtatcggcgagggtccagggttcgacgacctcg
60 **A E Q T Q S L**
4981 gttcgagggtcacattgatgatgcgacgcgtgtgggacagCGGAGCAGACGCAGAGCCTC
67 **L A D K R R T E Y R E E Q I K A R E N F**
5041 TTGGCAGACAAGCGCCGCACGGAATACCGCGAGGAGCAGATCAAGGCACGGGAGAATTT
87 **A E E E R S**
5101 GCTGAGGAAGAGCGATCTGgtaaggagcggccagtcaacaatccacagacatatcttcac
5161 tggatcacattgctctcatatttcaaaactgcagaaataggtagcttattggacaggat
5221 tattaatgggtgttttcaagttatcaaagaccatggcctgattgattttatatttgaa
5281 atgccgttatttgtgcttctagagttagacaatcgtcatcctgatctattcactgctag
5341 acgaagttttctccgtggaatgccattcctcgtcctgtgatgtcataatccatcctgtg
5401 catgagccgacctcattgctccatccttgtggtagtatactctggtgtttttgctttg
5461 gagcaaatggtatcattgccaccatccaatccaattaaacgtaactttagctgttc
5521 caggggtaaagcaagtgcaaaatcaaactgtggagtcaacggtggccacgagtttagttt
5581 gtttaacttgaaagctcgcatcttgcctgaagcatcaaatggcaaaaagtattactgctgt
5641 aagccatgttttttttagttttatcttaatgccgtggcagttagggttatagtcgctgc
93 **E T Y E Q T R E**
5701 tcagttgtgtgcatcaacgctgtttgtcctccgagAGACGTACGAGCAGACCCGGGAG
101 **A T E S W R E Y H Y D G L Y P S Y R L N**
5761 GCGACCGAGTCGTGGAGAGAATACCACTACGACGGACTCTACCCCTCTACCGCTTAAAC
121 **R H I P Y *****
5821 CGCCACATTCCTACTGAgccacacaaagaggactcaagagccagcagaaatccattgag
5881 gcactcgacaacaatgtgctatgcacatcaccaccagaaccaagatagctgccaactg
5941 ctgagcctaaacagatgattaatcaataaacgctgcgcaaagtaataaacgcatgagc
6001 aggcaatattaatgttcagtgagcattattttagtttaaacacattcaacaaaa

R36 PpyGRP *Pongo pygmaeus* from WGS gnl_ti_898384230, gnl_ti_709282398,
gnl_ti_709251400, gnl_ti_722747094, gnl_ti_853584013, gnl_ti_773925845,
gnl_ti_771413000, gnl_ti_744389839, gnl_ti_871695464, gnl_ti_1001818170,
gnl_ti_1228738127, gnl_ti_734562263, gnl_ti_757587698, gnl_ti_762269502,
gnl_ti_769409008

1 **M T W R Q A V L L S C F S A V V L L S**
1 ATGACTTGGAGACAGGCCGTCTGTCTTGTCTTCTCCGCCGTGGTGCTCCTGTCTAgt
61 gagtacgggaggggtcaaggcagagggtgttagttacacggttaagggagacttgccatgca
121 taggtaaggctgctcaggtgatgcagtagaaaggggtatgcttattgtagtgtgtgtgt
181 gt
241 aaaaaccggaaagaaagaaacaaaatagaaaaaacccaagccagcctgcttgggtgggtt
301 cctggtgagattggctctgcagctggtatgtgagaaccacgggccccctgccagggcct
361 ggcaggacgcttagcctggaagcaggatgggggctcagctcagggctcgggctcccctc
2 **M L R E G I S A**
421 tgacgctgcagcctcactctgtgccttgtcctgagTGCTAAGAGAGGGAATCAGTGCA
28 **S V G T M Q A A E E A S E**
481 TCTGTGGGCACCATGCAAGCAGCAGAAGAGGCGAGTGAAGgtgagtgcaggggcccggcca
541 cggggcagggcaggtgcagccagcaagcagcagcctggcaccatgctgctgggtga
41 **D A K Q K I F M Q E S D A**
601 caggcctctcctgggtttcagATGCAAAACAGAAGATTTTCATGCAGGAATCAGATGCC
54 **S N F L K R R G K R S P K S R D E V N**
661 CGAATTTCTCAAGAGGCGCGCAAGCGGTCCCCAAGTCCCAGATGAGGTCAATGgta
721 aggatgctggagggaccccactcccacaccctctgctcgcacctcccggcttctcc
781 tctcccacagtcagccgggagcaggtatgcagccgggaccgagggctcaccacagggta
841 tcaaagggactgccgctctgaatgagaaattacacctatctcctgaatgtaggtcgtat
901 attggattgaatgctttgtcagggtaggagtcaccacctctgcaaatgacttgaggaga
961 caggtcctcttgtcctgcttcttggccatgatgctacattaaacgcacctaacagggata
1021 agatgcgtcggatcttcagaaaggtgtaggaggggaaatctatactccggctctggagggga
1081 cccacacatcagtgctgtgctttcggggtactggcccagcacacctctgtgtaagagcaa
1141 cagcatcgcacatgggaaggcacaggacactgggtgctgagaaatgtgggtttggggac
1201 agctgtgctgctaagtggcgttctacttctcctcctcctggtcctaatttccttattat
1261 aagcctctgaaagagctgtgtcagccagcagagtttttttttttttttaagttttca

1321 ttttcaacacattgggtaagcctgtctgctgcacagcctgctgtagggcctgtggagcc
 1381 ctggcttcagggtgagaactactgcatcatcagtcnnnnnnnnnnnnnnnnnnnnnnnnnnnn
 1441 nnn
 1501 nnn
 1561 nnn
 1621 ccncttttctgattatgggatttctggtttccagtgctctgggtatacttgatacgccac
 1681 caactttataatcagagctaaatcactttactcttggggcttctgtcttctcatctgca
 1741 aatgaggcagctggatcagacaatcacttcaagttttaaagtctgtgtcaggagtaagta
 1801 atttcaggggaagtctccaaccataatccccacaaaccactcatcccccaaccagatgtg
 1861 acttctcagatgaactgtgctcccctaagtgtgtgccctaagtgcctcattcttgagg
73 A E N R Q K L R A D E
 1921 ggcaactcttgcttcttttctttcacagCGGAAAACAGGCAGAAGCTTCGGGCTGATGA
84 L R R E Y Y E E Q R N E F E N F V E E Q
 1981 GCTGCGGAGAGAAATATTACGAGGAACAAAGGAATGAATTTGAGAACTTCGTGGAGGAACA
104 N D
 2041 AAACGATGgtaagagctcttcagccagtgctcttcagggaggtggagctttggggagaaat
 2101 cacatgggttcttctcttcttctaccacactttttttttttttccatttttttgagat
 2161 gaagtcttgctctgttgccaggctggaatgcagtgggtgtgatcttggtcactgcaacc
 2221 tccacctccaagtttcaagcattctctcctgcctcagcctcggaagtagctgggattacag
 2281 acgcccctggctagtctctgtatatttagtaagacagggctttgccatggtggccaagc
 2341 tggatttgactttcaattggaggaggaggaaagagaagtccactttcaattctatccac
 2401 gagagcttgagaaagagggaggnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn
 2461 nnn
 2521 nnn
 2581 nnn
 2641 cagctaagttcatcacgcctgtcagctcacatgctctggatcctcaccagtctggcct
 2701 tatccgatacaaaagctcaaaaactcagtcagtgagtcaggtcaccacaggttgaatt
 2761 ggctgatggctgctgggtcagtggtcagtgctcagagtcctcccctgtcctaacaggtgctct
106 E Q E E R S R E A V E Q W R Q
 2821 gtctttcctccccagAGCAGGAAGAGAGGAGCCGGGAGGCTGTGGAGCAGTGGGCCAGT
121 W H Y D G L H P S Y L Y N R H H I ***
 2881 GGCATATGACGGCTGCACCCATCTATCTCTACAACCGCCACCACATCTGA

R37 PcaGRP *Procapia capensis* from WGS gnl_ti_1195590582, gnl_ti_1236674855,
 gnl_ti_1233397170, gnl_ti_1294915932, gnl_ti_1299280938, gnl_ti_1295305535,
 gnl_ti_1254668302, gnl_ti_1195502900, gnl_ti_1274934121, gnl_ti_1290852955,
 gnl_ti_1293262944, gnl_ti_1293262926, gnl_ti_1263908518

1 M T W R P V L F L S C V S A I V L L S
 1 ATGACTTGGAGACCAGTCTCTTCTCCTCTCCTGTGTCTCAGCCATTGTGCTTCTGTCTTgt
 61 gagtacggggaggggtcaggatggactggacttggtaagtgttctcggggtggccccgg
 121 tagaaaaggggtctaattatcaaaattgttgctaggacagcagcactatgctgcgtgtgt
 181 gtataaaaacacaaaaaagggaaacaaactgcttagtggtttcctggagggtggtctc
 241 cgttgctggatgtgagtgacactcaggagcccagcaggctctgcagcttgagatgact
 301 gtctcgagtgcagcttcgggtgagcctcggtttgggacagaggttagctttcactccat
20 L L R E G A S A S V G T Q L A
 361 gctctcctcccacagTGCTGCGGGAGGGGCCAGTGCATCTGTAGGCACCCAGCTGGCAG
35 A V E E D Q E
 421 CTGTAGAAGAGGACCAGGAAGgtgagtgaggaccccagggcagggccagtgaagccag
 481 ctctccacagctcaggtgctcctcattctggtggtgactgtcgtctatcgtgggttgag
42 G T K Q K I F A R E S D A S N F L K K R
 541 GTACCAAACAGAAGATTTTTGCAAGGGAATCAGATGCTTCTAATTTCTCAAGAAGCGTG
62 A S R S P K S R D E V N
 601 CCAGCAGATCCCCCAAATCCCCGAGATGAGGTCAACGgtaaggatgctggcagcttatgga
 661 atctgctcaccctgcttggccttggcttctctcctgctcccgtggccggccagtcagg
 721 ctggaggatgggtggaggatagagggtaagactaggcttgaggatgaaagtccctg
 781 cagctctgagtaaaaaatgataccatgtttattctgttgaagtcacatctttgatttaa
 841 taggttattagggtaagagacagaaaggaacagtgacacgcaaatgttgattttctgg
 901 aagcagttctccaaggcctttctcccagttgaactcaaccccccaatctttcagtttagc
 961 agcggagcacactaaatgttagcaccacagagggactccggctgaaatgcacttaacagg

1021 t g t a a g a t g c a t t c c a g t t t c a g a a a g g t c c a a g t g t a a g g g g g a a t a c a t g t t c c a g
1081 t c t g a a g a g a a c a a a c t g c t g t g c a t g c c t t t t t g a g t a t t a a c c a t t c c a c a g a a t a g c
1141 a a c a t c a c t g c a t g c g g g c a g g c a a t a a t t a a g g g c a g g a g c a t c c a g g a t t g t a g t g
1201 g g a a a c g t g g g t t t g g g t g a c a g t t t a t t g c a g a a t g g c c t t g g t t a g c c a c t t c c t c t c
1261 c a a g g c c c c a g a t t a c t t a t t a c t g a t g a a c t a a t t a c c a t a a a t t n n n n n n n n n n n n n
1321 n
1381 n
1441 n
1501 g g t a a g g t a g t t c t c a c a g t c c a t c t t t g t c t g a a g t g t t g g g t t c a g t a c t g g t t t c c g
1561 c t c a g g t g a c a g c a g c a a g t c c a a g g g c c a t g c t c t c a g g g a c c c t c c a g g t c g t c a g a
1621 c c a t c a g g t c t g g t c t t t a a t a g a g t t c t a t a t c t g c a c a c c c c t t t t c c c a t g c t a c a
1681 c t t g a c a c t t g a c a t t g t g t c c c c t g a c a g g g c t g t c t t c g g t g g t g a c c a g c c t c t a t c
1741 t a g c t c t g g t c t c a t g t t g a t g c a g t c t c c c a g t c a t a c g g a c c c t t c t g c c t g t t a t g c
1801 t c c a a a c t g t t t t a a a t c t a a t t c a g a a g c a a g c t c t t t c a g t g a a g a c c c c a c c t c a t a
1861 a t c a c t c t a g c c a g a t t a a a c t t c t c a g g c a c a t g a c t g g t g t c t g g t c a a t g t g t g c a t
74 **V E N R Q K L R**
1921 t t c t t g g g g a c a a c a c t a g c c t c t t t c c t t t c a c a g **TGGAGAACAGACAGAAGCTGCGG**
82 **A D E L R R E Y Y E E Q R N E F E N F V**
1981 **GCTGATGAGCTGCGGAGAGAGTATTACGAGGAACAAAGGAATGAGTTTGAGAACTTTGTG**
102 **E E Q N D**
2041 **GAGGAGCAAAATGATG** g t a a g a g c t c a a t c a g t a t c t t c a g g g a g t g g g a c t t g g t g g a a
2101 a a a t c a c a t g a t t t a c t t c c a t t t c t c c c a a a t t g t a a t t g g t g t t g g g g t t g g t a a g
2161 a a a g c t c t g g t t t c a a c t c a t a t c c a c g g g a t c c t a g a a a g a c a a a a t a t g a g a a g t t a
2221 c a a a a t g c c a c a g a g a a c t t g a g a a g g t g t t t t a g a t t a c c t a g t g c t g c t g t a a c a g a g
2281 a t g c c a c a a g t g g a t g g c t g t a a a a g a a c a t t t t a t t t t g t c a c a g t c c a g t a g g c t a
2341 a a a g c c c a a a t t c a g g g t g t t g g c t c c a g g g a a g a a t t t c t a t g t t g g c t c t g g a g g a a
2401 t g t c c t t g t c g t t a a t t t t c t t c c g g a c t a g g a g t t t c t g a g g t g c a g a a c c c c a g t c c
2461 t t t g g a a g g a c a t g c t c a g c t t t t c t a c t a g t c t t c t t g g t g g c a g g a t c c c c a a a t g
2521 t c t c t g c t a g c t c c t t t a t a t t t t a g g a c t g c c t c a a g g c a c a a t c g g a c a c a g t c
2581 c t g c c t c a t c a a c a c a a c t g g c a c c g a t c t c c t c a t t a a c a t c a t a c a g c c a g g a t t t a c
2641 a a a a c g g g g g a a c a g a a c a c a a t a c t g g a a t c a c g g t c t a g c t a a a t t g c t a c a a a g a t
2701 t t t t g g g g g g a g c a c a a t t c a a t c c t t g a c a g g a g g t a a g g a a g a g g a g g c t c t c t a t t a
2761 a c c a c c t g a t g a a c t a c t t t a g c c a t t g n
2821 n
2881 n
2941 n
3001 g g g c c a t g c a t t t t c t c c a t a c c a g a a g c c a c c a g g t t g t c c t a t t g a c c t a a t g c c a c
3061 a g a t g a t g c c a g t t t c t c t a g c a c c a a a a t a a g g t t c a c a g c c t t g c t a g g t a a a g t c c t
3121 c a a c t g a g a a a c a g a a g c g a g g a a g a c a t t t t g g g t g t t a g a t a a g t a a a t a a a t a a a a
3181 g a c a t t a t c t t c t t c t a t t a g t a t t t c c c a c c t t g c a a c a t t c t t c a t g g a t a a t t t c a
3241 a a c a c t g a a g a c t t g t g a c a t c t g t t a g t a g t t a g g g g t t t c t a a c a a t t a c t g g c a g t
3301 c t t c c a t t g a c g t c a g a t g c t a a a t c t a c a a t c a c a c a g t g a c a t t c t t c a t a a a t a t g c
3361 c c t t t c a a a g a c a g t a a a a t c a g g a t a t c c t t a c t c a t t a a a a c t t c e t t c t c t t t t g
3421 t t t t a g c c t t t c g c a t g a a g t t t c a a c a t a t t g a a a g t a t a t a g t a a c t a t a a
3481 c t a t t a a a t t a t a g t a t a a c t a c a t t a t g a c t a t a t a a c t a t t a t t c a g a a t c a a c a a t
3541 t a t c a a g a g t t t c c a t a c t a g t t t c a t t a t c t t t t t t t t c c a g t t a a t t t t a t a a a g a t
3601 a a t t t c a a a a g t t t t g g a a a c a a c a g g a a g t a t a g a g a a t a a a t g a t c t g t a c t c c c
3661 a t c a a a g t t g a c a a c t g t a t t a t c t c t t t c a g g a c t t t c t t c a a c a t a a a c c c a c a g t
3721 c t a t t t t t g t t c c t t a g t t a t c g t a t c t t c t a g c t a g a g g c t g t g t g a g c c t c t t c c c t t
3781 t g c t g g t t c t g a g g g a a t g a a t a c t g a a g t g g a a c a c c a g g c t c t g g t c t c a g c t c t g c t
3841 g g c a a c g a g c t t t g t g a c a t t g a c t t t t c t g g g c c t t a c t g a t t t a t c t g t a a a t g g g
3901 g c c t t t g a a c t c a g t g t t c t c t c a g g a c c c t c c a g c t c t g g c a t t c g a g g g t c t g g g g t
3961 c a c a a a t g t a c a c a g t g c a c t c g g t t c t t c t c a c c y g a g a c a g g c t g t c c a g c a c a a g t
107 **E Q**
4021 g g c c c t c c t c a g a t c a g a g c c c c a t g c t a a c a t g a t g c c t t c c t t t t t c c t c c c a g **AACA**
109 **E E R S R E A I E Q W R Q W H Y D G L Y**
4081 **GGAAGAGAGAAGCCGGGAGGCCATTGAGCAGTGGCGCCAGTGGCATTATGACGGCCTGTA**
129 **P P Y L Y N R H H I *****
4141 **CCCACCATATCTCTATAACCGTCACCACATTTGA**

R38 PvaGRP *Pteropus vampyrus* from WGS gnl_ti_1320790134, gnl_ti_1320977642, gnl_ti_1321293933, gnl_ti_1356267875, gnl_ti_1333951379, gnl_ti_1386668052, gnl_ti_1320541581, gnl_ti_1322145808, gnl_ti_1394292857

1 M A W R Q L L L V S C L S A A M F L S
1 ATGGCCTGGAGACAGCTGCTCCTGGTCTCCTGCCTCTCAGCTGCTATGTTCCCTGTCCAgt
61 gagtgtggcgagaccccaaggatggactgatgttgaggctgctcaggtggcccagggaga
121 aaagggggtgcttatttataagacaggcgtgcctgggtgtgtgtgtgtgtgtgtgtgtgtg
181 acaatacaacacagagaaaaacagcttgtcctgtggtttcttggggagattggctctgggc
241 tgggtgtgtgtgggacccaagactccacaccagagcctggcaggtcacagagcttgggaag
301 gtctatcctggcctggccgggatgagggctcctctaggtgtgctccagccctcgctctct
20 M P Q E G S S A S V G I N Q V
361 gctctcatctcacagTGCCGCAGGAGGGGTCCAGTGCATCGGTGGGCATCAACCAGGTCT
35 S G Q E A Q E
421 CTGGACAAGAGGCTCAGGAAGgtgagtgcaggggcccagccaggagtgcaggggtgagtggg
481 ccagctcctgtggttagcctgggtgagctcgtcctggttgtcactggcctcttttggttt
42 G V D Q K V F L Q E S D A S S F L K K
541 cagCGGTGGACCAGAAGGTTTTCTTGCAAGAATCAGATGCCTCAAGTTTCTCAAGAAGC
61 H G K R L P K P R N E L I
601 ATGGCAAGCGGCTCCCCAAACCCCGAAACGAGCTCATCGgtaaggatgttgggtggcctgc

R39 RnoGRP *Rattus norvegicus* from Chromosome 17 and EST CF112437, CB322394, CB322433, CB323526, BQ193076, CB324029, BU758873, CA504503, BF560372, AI030206

1 M S W R Q V
1 ttattatctgccctgtggtttctgggaagtgcactgtaaagATGTCCTGGAGACAAGTCA
7 I L L S S L S A L V L L C
61 TCCTCCTGTATCTCTCTCGGCCCTGGTGTCTCCTGTGTAgtgagatgaggagggccaaag
121 ggtgggcccgtgtagatgtacaagtaaatttgttcagggtggcatgggtaggaggggtgtg
181 tttagtaaggtaactattccttgggtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtg
241 gtg
301 cagcaaaagataaaaaatacagagacaaccagctcacatggtggcttcccatcaagattgg
361 ctacgtggctggtatgctgaggggtagagggccccacatgtagtctggcaaccactgcac
421 ccagaactattgaatctccaccgagacctctgatgttgcagcctttccttgtaccctacc
20 M L Q E G T S A S V G S R Q A A G E
481 ctatagTGCTACAAGAGGGGACCAGCGCTTCTGTGGGCAGCAGACAGGCGGCTGGAGAGG
38 E V Q E
541 AGGTGCAGGAAGgtgagtctaggactatccctgcatgtgggagaggtgcatcctgctcc
42 G M K Q K I
601 ccacccccatgctgtgtgtgaagagctcttttctggtttcagGTATGAAACAGAAGATTT
48 F M Q E S D A S N F L K R R G K R S P K
661 TCATGCAAGAATCCGATGCCTCGAATTTCTCAAGAGGCGTGGCAAGCGGTCTCCCAAGT
68 S R D E V T
721 CCCGAGATGAAGTCACTGgtaaggaaggatgctggacggtctccctcccacagtgaagaa
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1201 aggttgaactgaatgtggcatcagagtacagaaccatacgaataaaccacacaaagaac
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1621 gaataccctggttgggtcattgaccttccagcccaggaggactggagtttctgaccctg

1681 aaattgcttccctcaagcctctgaactcaggtcaccctgagtatgtgggtttcattctttc
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1921 cgccagaccgcacacaggttgcatttgaagtgggctgatgtcaagcaacattgaaagct
1981 tgtactccaaggattgcagtccttgattgcaatcagagacgcaacttctggcagactctg
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2221 agttatagggaatcatgaccttggaatgaacttggacttagagctgcttagagtaagaatt
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2401 tgcgtgtgctg
2461 tagtcaactcaggtcttgtttctaagttgccgttcaacttttcttttgaggcagggct
2521 ctgagtgccctagaacatagcagatagctgaccagtaagcccctgggacttactgtgtt
2581 tcctccatcccagctctgggattacaagtgcacatggcaccatgccagttactttaaaaa
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3541 gtgtgtgtgtgtgtatgt
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4861 gtagtctgatacttggatcacatgctaacttgtgaccagagccaaagcactcaccctc
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4981 ccttcgtgttttaagctccatgcaaggcacaaccatttcagcaagacccttgaccatcc
5041 ctcttgaccaggtccaatttctcaggtagagcgtggtatccctcacacacgcgcctcct
74 **A E N R Q K L R D**
5101 tcctctttctcaagagcagactctgtcttcacag**CGGAAAACAGACAGAAGCTTCGGGACC**
83 D E L R R E Y Y E E Q R N E F E N F V E
5161 **ATGAGCTTCGGAGGGAGTATTATGAGGAGCAAAGGAATGAGTTCGAGAACTTCGTGGAGG**

103 E Q R D

5221 AACAGAGAGATGgtaagcgactccagcagcagccttggggaaggagagcatagtgaggc
5281 aatcccaggctcaccctcatgtctcccgaagttgactggaggaaggaggcgtggatgggg
5341 gaattcattttcaactcctatccatggtagacgtgaagagaagccgaaaaaatggctatg
5401 cagacttaaaaaagctgtggaagaggtaaaggacataggggttggggacacactggcccg
5461 gggaaagagtggagaccaggagttattgactgactgtgtggaagtaaaactccccatct
5521 ctgttttggaaactctgtggatctaagtgccgcaaacttggcttccacagagttgacagg
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107 E Q E E R T R E A V E Q W R Q W
9181 tctttccgcctcagAGCAGGAAGAAAGGACCAGGGAGGCGGTGGAGCAATGGCGGCAGTG
123 H Y D G L Y P S Y L Y N R Q N I ***
9241 GCACTATGAGCCTGTATCCTTCCTACCTCTACAACCGCCAAAACATATGAacctcacc
9301 tcaagcaactggggaagagaagcatagacacgcctcccgcctctctgcagacagaccat
9361 aaggtgaagctccctcgaggcctcgccaccagttgcaggaacacacctttgttctgac
9421 gccttttgaggcctggttttcccttctttccggatgtttgctttgtctgtttttgagt
9481 agcgaccgcctgtggttcttcccagcgtcagatctacaccttggcgccttgccttagccac
9541 cagaaacagagttagaatgcctgtctgatgggacacttggaggatcgaagcataaagatt
9601 ttaagcttgcttggcctattaataaaaagtgtgactcga

R40 SsaGRP *Salmo salar* from EST DV670616, DV670581

1 ccgcccggacaggtacgcgtgggttcataaacttgactgtagcagcgtgcttactgtga
1 M S W T H L V F L S L L A T L L I
61 ttcttcatcATGTCCTGGACTCATCTGGTCTTTCTTTCTCTGCTCGCCACCCTCCTCATC
18 L T L S P G V W S A S V T D G R E G K A
121 CTCACACTCTCCCCGGGGTGTGGAGTGCATCGGTGACAGATGGAAGAGAGGGAAAAGCT
38 A E P K G S A R R V F M P E A D A A N F
181 GCAGAGCCCAAAGGGTCAGCACGGCGAGTCTTCATGCCCGAGGCGGATGCAGCAAACCTC
58 F K K R S R R S A K H E A E V L A E Q R
241 TTCAAAAAGCGTAGTCGGCGCTCGGCCAAACATGAGGCGGAGGTCTCTGCTGAGCAGAGG
78 V R L S A D E R R R E Y Y D E Q R D E F
301 GTACGTCTGTCAGCTGATGAGAGGAGGAGGGAGTACTACGACGAACAGAGGGACGAGTTT
98 E N Y V E E E R D E Q D E R T R E K T E
361 GAGAACTATGTGGAAGAGGAGCGGATGAGCAGGATGAGAGGACACGGGAGAAGACAGAG
118 Q W R E F H Y D G L Y P R Y P R G W ***
421 CAGTGGCGCGAGTTCCACTATGATGGACTCTACCCCCGTTATCCCCGCGGTTGGTGA
gca
481 tgttccataggccaaggagatcagaacatagtgaccaggctgtgattggcaggaccctg
541 tgtcaattaagacacctagcctatcagacggacataacaagagcatgggaggtggccaaa
601 acatcactcacctagaagtataaagggttaagtacaaaacgattaaactcaatcatttaa
661 aatggtaataattaagtagataaacctccgttttgaacgtttatattaagactttgggt
721 gtggcaggtcaagttcaaaaaggaggctgtcgtgattgggtgtgtgtttctatgcatgc
781 ttatttcaatctctatctttgtgcatgatatctgtgtga

R41 StrGRP *Spermophilus tridecemlineatus* from GeneScaffold_6225

1 K R K I F M Q E S D A S N F L K R R S K
1 AAACGGAAGATTTTCATGCAGGAATCAGATGCCTCAAATTTCTCAAGAGGCGCAGCAAG
21 R S P K S R D E V N
61 CGGTCCCCCAAATCCCGAGATGAGGTCAATGgtaaggatgctgagtggtctcttaccacc
121 cacaggggattaagggttgcagcaaagcccttgaacatcaggatgactgtagctctgaag
181 tagaaattatactgtttccttgatggtgggtcacgtgttggggcaaatgcattgctaagg
241 tgaggacaaaaaagaaacagtgatgcatcaaatgtatctaacaattatgagatgcatccc
301 tgcttcagaaaagtgaataatgtaaaaggaggaaatgttctctggtctagaaagcacctagc
361 acttttagtgggtgttttggagtattggcaaggtgcacagtatagcaacagaatcacatgc
421 aggaaaagatcccaggggacaggagtgtgagaaatgtgggcttagtgacagctctgttg
481 ctaagtggccttagccacttctgtctgtggtcctaattcccacttatatgctctgaac
541 aaactgtgttagccagctgtgcttcttgaagccttatttgcagtcagttggtgagca
601 cgtctcccttagagcctgggctgggctccacactgcaggccctcatgttcttgacct
661 accgcctttgaacgcatttgagtttctacctctaaacttgattcttcttagactctaag
721 ctccagctgtcctggccaagttgactgcttgattcttctctgtgtgtgtagatgaatga
781 actctttgatccctgagcatatgcagtgaggtgactttctcagtgaaaataacaggatt
841 attttcaaatgatgaggaagatcagaggtggaaatgcttggagatgagaatTTTTTTTTT

901 attggataagtgtagtcagattagtgaaatctctagacctcacacaatttgggattttaa
961 tttggcaaaatcaaaaaactgaaaggctatgatggatggtgggccattcttctgtctgaa
1021 atcagagaagcagctttctgcaaatttccaggggaaaacaggcaactttaatacagacca
1081 atatatctgtcctctgaagctgactcagaaacataagatctgtgattaggctgaattccc
1141 tgaccttaggcaggagctcagtgcccaagcagttgtgagaggacaaggacagtcaggtg
1201 aacccaggactgcacgtaaatgcatctgagaataacctcatcgatttgtatagatgaatg
1261 gcagagctgacagagatnn
1321 nnn
1381 nnn
1441 nnn
1501 nnn
1561 accgtaccggcttgtgagttatctctgatttcaaagtctaaagtgccctgggtgact
1621 tggattataccactaacttgatgactgggctaactcacttttctcttggggcttcaa
1681 tctcttcacctgcaaaaatgaggtgatttgcctgtcatgatgtgcacatctgtaatctca
1741 gtgacttgggaggctgaggctggaagatggcaatttggagacagcatgggcaacttagt
1801 gagacctgtctcaaaaacaaaaacaaaaataaaaacaaaaacaaaaaaggcggggct
1861 ggggatggagctcagtagtagtgctcctgggttcaatctctagtagtctcaagaga
1921 ggggatgtggcaggggtgggggtaactgggtaggatcatctcccaggtccttccagtt
1981 taaagcctctgccaggaataaacatttccagtgaggtctcccagctaaataacctcccaa
2041 accacttttagcttctcaggtaaaatgttgggtttccctaaatgtgagccctcaatgtc
31 V E N R Q K L W
2101 cctctcttgggggcaactacctcttttcttccacagTGGAAAACAGGCAGAAGTTGTGG
39 A D E L R R E Y Y E E Q R N E F E N F V
2161 GCTGATGAGCTACGGAGAGAAATATTACGAGGAACAAAGGAATGAATTTGAGAAGTTGTG
59 E E Q K D
2221 GAGGAACAGAAGGATGtaagggttcttgcctcatctgccatttaagccctgttttctgag
2281 tcttgacctttcatctcttgtcaatagataaaatagtagaaaaggcaaggggcaagtgc
2341 tctaaccaagcaattaatgtaccatgccctgcctcaaggctcctttcttccctccagc
2401 cttgctggctgcatcagggctcagtagggatgggtatggatgagatagaggaagacta
2461 tgtctttaagccaatgccttccaccagtggttggacttgcctgtctagtgcatccac
2521 agcagacatctgtagcaacatttaagggatcaaaccagtaggcctgattctcattatg
2581 tgcctgggttcttcttttttggatcttctcaaacttcaagataaaaaatggctcgaacaa
2641 gctcacttgggtacctcctgggtacatatgagcttgaacacaggaccccgatttggggact
2701 tttggtggagccagctcttttgtttaccctgactccttgactttgatagacagaggaag
2761 tatgatcctttaagggcatcctccagtgaaaagactccagtgaaaagccaccaggacca
2821 agggctacaggctgtgcttatagcccttcaagtggtcctggttgagcccaacaagcaga
2881 tccctgggctcagatcctagcaaatcaactttacatttttttttttttttttttttttt
2941 tttttatttttttaaaaatttattttatagcagtgctgaaaccagtgccctcacacatgc
3001 caggcaagtgcaactaccactgagctccagccccagccccaaatcaacttttttgggg
3061 agaatactgtgaaaaacatagggctgtcctagcgttagaggacatgcttgttacctaggt
3121 tgactgcttggctcgagaactgtttaagtttaagaaatgaaaaataagactttaagtact
3181 agaaaaacataaaaattttttgagaggtgagatgaaaaagatgtcggactatnnnnnnnn
3241 nnn
3301 nnn
3361 nnn
3421 nnn
3481 taccgaaaacaaaacaaaacaaaaacccccaaaaaccttgggtaaaatagagataagggaa
3541 aatttgccatttaaaactattgctgagtatacaggttcatgacatttagtacattcact
3601 attgtgcaactattaccactagttccaaatgggttttattattccagacaggaactctgta
3661 cccattaaataaataactgtccattcttcttccccctaatcttggtaacctccattatat
3721 tttttgtatccatgaattttcctgttctagatatttcatataaatggaggacacagttat
3781 ttgtctcattatgcatggtctatttctttagcacaatgttttcaaagtttatccatggt
3841 gtgacataatccattcatttctttttatagctgaaaaatttctctttagcatatttaca
3901 tacataatttgtttatataatccccataaataaacacattttgtttatccattcacctgtggg
3961 tggacatttgggtcgtttccacttttgagtgactgtacatggttggctgtgagcattcc
4021 tatatgtacaagtatctgaggctctgttttcaattctcttgagtataagtctaggaatag
4081 aatttctggaaaatgtggtaattttattaacttttggaggagtctcactcacctttttca
4141 aatttggagggtcttatgatctgccagtgccctaaatgcaattaatggtagcatcttg
4201 aattggcaccaggagcctaattctacaattacataaagatgttggtttggaaacatatctg
4261 agcaaaacaaaagtaaaattatagctttcttaactcattaaaaactttcttcatcccttt
4321 cagccttttactatgaaacacttcaacatatggaaaaggatcaggttaatgagcccat

1981 nnnnaagagagcttgggtgtctgtgtccagatccgagtcctccatcctgacacaaggact
107 **E Q E E R S R E A V E Q W R Q**
2041 ttctctctcgttcccagAACAGGAAGAGAGAAGCCGGGAGGCCGTGGAGCAGTGGCGCCA
122 **W H Y D G L Y P S H L Y N R H H I *****
2101 GTGGCATTATGATGGCCTATACCCATCCCATCTCTACAACCGCCACCATATCTGAacctca
2161 acctaacagaccagaaaggcagagcctgagaggtctgtctaccctgaccaaccgcagtggt
2221 caggcatctctgttgctgctaaccagtcagtgacagggcctcagcctggggccttctgt
2281 tctgatggattaaacaccctggcttccgcacatcctggcaggtatttctgaggtgagcaa
2341 cacctgtggggcctgtggcactaacctacagcggttttcccttgccttgcattgttcc
2401 caaagtgagcctccatagaacaaagaatccagtgagagaaaagctgacaaataaaaa
2461 tgctgagtcaacactcta

R43 TruGRP1 *Takifugu rubripes* from WGS CAAB0100008

1 **M A R T Y A T L L A L L A V Y I T L F**
1 ATGGCCCGACGTATGCCACCCTCCTGGCTCTCCTCGCTGTGTATATTACTTTTCTgt
61 gagtctgtagatcatttcagatggcacaggatccttattatgtcacggagagaaaagtggt
20 **S S P E G T H**
121 tgctctaaattcaagccactgtcttttgcctatggacgcagCCTCCCCAGAGGGGACACA
27 **S A A V P Q S T G G Q R D P S**
181 CTCTGCAGCTGTGCCCCAGAGCACAGGCGGCCAGAGGGACCCATCAGgtgagcagcgtcc
42 **G P**
241 tcggtgtcgcacatctctgcccccttaagttctgtcagctgaccctccctctgcagGTCCTC
44 **L K M I F M K E S E A S T F F R R R S R**
301 TGAAGATGATCTTCATGAAGGAGTCCGAAGCTTCAACCTTCTTCCGAAGGCGCAGCAGAA
64 **R G L K S Q D E I N**
361 GAGGCCTCAAGTCCCAGGACGAGATTAATGgtgagtttacaccactctggagatgtttta
421 ctaaacacacaggactttctaaaagaaaaaaaccccactaatttctaacagtctcaaca
481 gaaatgactcaatccggtttcaaaagctgcaacagaggaaatttatgtattttccaagc
541 tcatcagctcagcgttagatcaccattactgatgacaaattttcaaaaatattccagttt
601 gctgttatccaagcaggttaaaggttacatttgtttacttctctgaactcgtgaatacag
661 tggtcacattttagaaggcaaaaacaaatctgcttaggaaatgagacgaatccagtaaaag
721 gttgatgcagctttcaactaacgtgatcctgggagaaatcctctcggaccataaaaaaca
781 tcccatattaacgctataaaaactatgctgagttcgcgcaaaacaaggagaaaagtaaaaa
841 cctgagccaaagaagaggtcaaagttctggtgaaactgttttaattttacattaatgat
901 cagaattgttatgacagcttgagaacctcagcagagacaggtttctggagtcccggggca
961 gcctggagctcactcacactctgtcacacacacacacactgcgccagccatccagcaggt
1021 gattaagcagcatgagttgtgtaacctgtcattggagacaccgacgatgccgagttcaa
1081 aggaataggaaaggccatcgacgggaggggaaaagtctgatgagcaggtgggtgagcggc
1141 cgggaggtgagtgagaatgttccagcacacagacagagaagagtcacagaaaaaggcag
1201 taaaacattaagaaagaaggaaacaggggttgatgatgaggagcccgtttggaacgcacaa
1261 tgtcactcactgtttaaggaggttggaactcatccggccctcgtatgctctccattaagac
1321 aacgcaacacgggtgtttccatcattccccagctcagctaacgtctatgtgactcattac
74 **A E Q R Q V L A A**
1381 ctcatthaactgcgctgtttcttgcgtgctggcagCCGAGCAGAGGCAGGTTCTGGCTGCA
83 **D E R R R E F H E E K R K K F E S H A E**
1441 GACGAGCGGAGGAGAGAGTTCCACGAGGAGAAGAGGAAGAAGTTCGAGAGCCACGCCGAG
103 **E E H D**
1501 GAGGAGCACGACGgtgggacagcgcgacagggttcagccgaggtcctccagaccaccgg
107 **E Q D E R T S E S T E Q**
1561 ctcacaaaaatgcttctgtttcagAGCAAGACGAGAGGACCAGCGAGAGCACCGAACAGT
119 **W R E F H Y D G M Y P P H E Y N R H H T ***
1621 GGAGGGAGTTCCACTACGATGGGATGTATCCTCCCCACGAGTACAACCGCCACCACCT

1681 GA

R44 TruGRP2 *Takifugu rubripes* from scaffold_168

1 **M S W S P V M G S L P A I V L I L T**
1 ATGTCCTGGAGTCCAGTCAATGGGGTCTTTGCCGGCCATCGTCCTCATCCTCACCTgtgag

61 tacggctgctcaggggtgggaaaactggaggaaaccggttggttcctaaacttacatttac
 121 cttaaaatacaagcactttgtttttaaccactttaaggatttttagagcttgaccg
 181 taggacaggaggacggtggatttcgtatctgagccaggaagcataaataagcaacgttatt
19 F C S M A E N A A
 241 attgaattattgacatttttgcctcattctccagTTTGCAGCATGGCTGAAAACGCAGC
28 V R D D S R A L R P R
 301 TGTGCGTGACGACTCCAGAGCGCTCCGTCCCAGAGgtgattctcctcttctctctttcc
 361 tgctgtgtgttctctccatccctgctccatcaatgatgcatcttatcctcccgccaccag
39 G A A Q P V F V A G S D A S N F F K R R
 421 GGGCAGCGCAGCCCCTGTTCGTGGCGGGGTGACAGCGCTCCAACCTCTTCAAACGCCGCG
59 G R R S G R Y H A E L L
 481 GCCGCCGCTCGGGCCGGTACCACGCCGAGCTGTTAGgtacgagcccagtttacgtttcat
 541 tgcactgtataaaaaaaaaataatcttgacatttaatatcaciaatggcaaagaggtcaaattc
 601 attcaaagctctgttatcaaactcttcccgacacaaaacacatgtgggtcaaagttctg
 661 gttaaagtctgcagcctccttccgtagactcacctgctaattaaccaaactccagaa
 721 aatactgtataaaaaccactggcagaacaaggaatcagccaaagtgtgacgggatgagcc
 781 gctgcaagctccagcgaggccaggtggtctgtcatccttgtgttctatcttctgtggg
 841 accttcagacacagactgactctaaaccctcaaacactccttgaagttccaaggagcag
 901 caaaaggtcctcacttagctagtagaatgagtatggtgggactcaatgtgtagccagac
 961 acacacagacacacacagacacacgacacacacacacgacagggagccgttagcaggagtc
 1021 acaggccggtgtggagcagctcactccctcagcgatacaatgagttcattcacttctcc
 1081 cctgctgtcggacacacaccaaccacaacacacgagaacgaggcgttctgaatcgaagg
 1141 tgcattcctgctgctgttctatttaaaagcaatttcgcttggagagactcaacagggt
 1201 gcaccagcagagctgaagcgtttaaaccgtggagccacagcagcactgcagagacctt
 1261 aacggaccagaccataatattatataagcttgtgctcgggtgtgaacgtgccgaggaaa
 1321 agcccaactcttcttctgtgttgacgctctgccgctcgcaactgtagtttctgtggtt
 1381 ttgacgctgctgcaacacacaccgtccgttacacaggtgacactcctgacttctcctct
 1441 nnnctcc
71 A E Q R E K I F A S E R
 1501 ctttctccccccccccccccccccagCTGAGCAGCGAGAGAAGATTTTTGCAAGCGAGCG
83 W R E H N E K R S N V Y E N Y A E E Q R
 1561 GTGGAGGGAGCACAAACGAGAAGCGGAGCAACGTCTACGAGAACTACGCCGAGGAGCAGCG
103 N
 1621 CAACGgtgagcagcatgacctcaaagcctgggaggcaggtcggccacaggcctctggacc
 1681 gcagcaggacgctggaggggtccatttgggtccccctcagccgctgccccccctgc
 1741 ggctgtctgtgcccggccacaggggtgcaacgagcctcccacactgggacacgctccc
 1801 ataaagaaccctctgggttccccataaactggaggggtggtgagagtcagccagcgttatt
 1861 ttagtcgccagattatctgccctgtaaaggctggttagactgactgctgccccccggg
 1921 cgcctcggggagctttatttcagactcccgtgctgtgatggcgtgagaataaacatcag
 1981 aggaggaaaaccacagaacagctctgaggttctctgaggaagcgttttcattccagggtga
104 E Q T E R
 2041 ccaagattgtgaagcgtgtaactaataaatcctgatgtgtgtctccagAGCAGACGGAGCG
109 S R E T S E Q I R E Y H Y D G L Y P R R
 2101 ATCCAGGAGACGAGCGAGCAGATCCGGGAGTATCACTACGACGGCCTGTATCCTCGCCG
129 Y W F H ***
 2161 ATACTGGTTCCACTGA

R45 TsyGRP *Tarsius syrichta* from WGS gnl_ti_1638729032, gnl_ti_1617617066, gnl_ti_1495990382, gnl_ti_1596629435, gnl_ti_1588792942

1 S R R F F M R E S D A S N F L K R R G K
 1 AGCAGAAGATTTTTTCATGCGAGAATCAGATGCCTCGAATTTCTCAAGAGGCGTGGCAAG
21 R S S K S R E E V N
 61 CCGTCCCTCCAAATCCCGAGAAGAGGTCAACGgttaaggacgctgggacgctgcctcctgc
 121 cggccccctcccgttctcctctccccacagtgcagcagccagtagcggggaccgaggggt
 181 tcaccccgagccctcggggacgcaagtggctgcagctctgaatgagagatgaccccatat
 241 tcccttgattgtgggtcccatcttgatcgaactgggggcaagaacgaaaagaacagcg
 301 tcacatcaaatgcacctgcaggggaacgatgcatcttgatttcaaaggatgtgaggggg
 361 agatcagtggtcaagtcttgagcggacaccacgggtcaccctgtgtgtggggaccacgg
 421 gcacagtgctgcgttctcgggaacagcccgccacagcagggcacaaagagacagctcttcta

481 gctgctgaaaagtgtagctttggggacagctttgctgctgggtgacctcagtcacttct
 541 gccctggcctcatgtccttgcttgaagcctctgaaagagctgcagagttctgaaaagt
 601 ttcattccgatgcagaatccaccacagtgcgaggnnnnnnnnnnnnnnnnnnnnnnnnn
 661 nnn
 721 nnn
 781 nnn
 841 tgaccatctcgagcagctgaagctccaatgtggtggaattcagagtcattttccatcatg
 901 gaactcattttctggtcataggctttccagtggtgctgcatggagacaccgccaac
 961 atcacggccaagctaactttggggcctctgccttctcatctgtaaaatgaggctgttgg
 1021 atcagatgatctccgggtccttcgaggtttatgatcaacccttcaggaaagccccag
 1081 gctcagtcogtcatctgccacaccccccaaccagattcagcttcccagatggaatgctggt
 1141 gctgccctgtgccccgagagcctcgtgcttggggccactctttgctcttttcctt
31 A E N R Q K L R A D E L R R E Y H E E
 1201 ctcagCGGAAAAACAGGCAGAAGCTACGGGCAGATGAGCTGCGGAGGGAGTATCACGAGGA
50 Q R N E F K N F V E E Q N D
 1261 ACAGAGGAACGAGTTCAAGAACTTCGTGGAGGAGCAAAATGATGgtaagagctccgtagc
 1321 cggcgtcctcggggatggcgctttggggcgaaatcacatggttgcctccacttctct
 1381 ctttttaattggagcagagaggttaagagaacatctactttctttttttcttttctttt
 1441 ctttttaaaagagcaggctttattgaaagcacgaaaagtcccacagggggagggggaaac
 1501 caaagggattggcccaaaagaattacttctttttttttttttttctgaatcggaatcc
 1561 tcaactcgggcccccccaaatggaaaaggcgtggctggctcccgggcccccgcaacctcaa
 1621 ctggggggggttccggggatcctccgctccccctcccaggagctggaataaaggg
 1681 atgtggctacccacccccggggggaatttttgaatttttggaaaaaagaagggtccgc
 1741 ccaagtttccccgggggggtctcaacccccagggttccctcaatccctcccccttggg
 1801 ctccccaaaggggtgggggtaatgggaaaaaaaatccgctccttttttaaggccccca
 1861 ggggann
 1921 nnn
 1981 nnn
 2041 nnn
 2101 ctagtgtgacagacagaaaaagtgtggcacaccaggccttggctccacatctgtctgc
 2161 ggccatggccctccggggcctgacctgcaaacgaggcctgtggactcaagagctctggac
 2221 ctttccagctctggcattctctctgtcccagggcgcagtgccccagggagcggggggg
 2281 tggggggggggcctgactgacggtgctggtggcagctcccctggggccaaagtcc
64 E Q E E R I R E
 2341 ccctggggctaacaggtgccttcgctttcctccacagAGCAGGAAGAGAGGATCAGGGA
72 A V E Q W R Q W H Y D G L Y P S Y L Y N
 2401 GGCTGTGGAGCAGTGGCGCCAGTGGCATTACGACGGCCTGTACCCATCCTATCTCTACAA
92 R H H I ***
 2461 CCGCCATCACATCTGA

R46 TniGRP1 *Tetraodon nigroviridis* from Chromosome 13

1 M T R T Y A T L L G L L A L F T A L F
 1 ATGACCGGACGTATGCGACTCTCCTGGGTCTCCTCGCTCTATTTACTGCACTTTTCTgt
 61 gagtctgatgagcattggtgatgctggaggggtctttttttaccgcttgctcctaaactca
20 C S P G D T H S A A V
 121 agctgctgtcttttgggtccgctgatgcagGCTCCCCGTTGGGACACACTCTGCAGCTGT
31 S Q S A G R Q R D P A
 181 GTCCAGAGCGCAGGCAGACAGAGAGACCCAGCAGgtgagaagcctctttcttctcatgt
42 G P L E M I
 241 ttccgaacccttcagttccgcttcgcccaccttccctccgagGACCTCTGGAGATGATCT
48 F M K E S D A S S F F R R R S R R G L L
 301 TCATGAAGGAGTCCGACGCTTCGAGCTTCTTCCGAAGGCGCAGCAGAAGAGGCCTCTCA
68 K S Q D E I N
 361 AATCCAGGACGAGATTAATGgtgagtttatttactttctcaacccttcagctcgttgtc
 421 agatcaacatttccgatgattcattatcaaagtcatgctggtggacgcgctgggtacttt
 481 tatctgtctcttttctaaactcctgattgcaccgctcacgttttggatcacaanaacaa
 541 tctgcttaggagccgagatccaaatccagcaagggttgacgcccgtattcgaagccatgcg
 601 cagctccttcagaaaaacgacagcagatttctgggaatctttatcgggtggatgga
 661 agcctgggaacgcttgaacgcccataaagaggaaaagtctcaagcataaaaaacatcaga

721 cgттаатgctataaaaccatgсagagtccаттаагаaggagtaaaaaaaaaaatagcaaa
 781 agaggggtcaaaggtcagagtcaaagcggtaaagtтggatgatcagaattgttatgacag
 841 cttgtgtacaagtttctggagtcacagggcagcctggagctcacccacacacacacacac
 901 acacacacacacacacacactgacgctaccaaaaccacaaagccaacaatcaccgattcac
 961 caaccacacagtgсgtgattaaгcagttgtgтаaccgcсgtgggacgacagcgaggaga
 1021 caccggcgctgcccggcgсagatgaaaagggсcgttaaagagaggagaagtтggatgagc
 1081 gagtggggсgagcggtcgggaggtgagcgсggaatgtgсcggcacacggggacggagagaa
 1141 gtcacggaaacaagaagacagaggaaaagagtгagatgaggaggctgtttggaagctcag
 1201 aagttagccagacagcagctgaggttcaggggсctcgтcccttcacgggggсctcgтccctcac
 1261 tcacgggggсctcgтcccttcacgggggсctcgтcccttcacgggggсctcgтccctcac
 1321 gggggсctcgтcccttcacgggggсctcgтcccttcacgggggсctcgтccctcacaggсcг
 1381 caccaaccgctcgгcttсacttttccccggттtаттаacгacттtаaccccaacгсgt
75 A E Q R Q I L A A D E R R R E F H
 1441 ttttgtggcagCCGAGCAGAGGCAGATCCTGGCCGACAGCAGCGGAGGAGAGATTCCA
92 E R K R K E S E S H G E E E P D
 1501 CGAGAGGAAGAGGAAGGAGTCCGAGAGCCACGGCGAAGAGGAGCCGGACGgтаaggсcgg
108 E
 1561 cggсgсcaggtttcagсgggгctcccctcgгagaaccgaaacacttttaccgtтccagAA
109 E D G R T G E S T E R W R E F H H D G M
 1621 GAGGATGGGAGGACCGGAGAGAGCACGGAGAGGTGGAGGGAGTTCACCACGATGGGATG
129 Y P P R G N N R H H ***
 1681 TACCCTCCCCGGGGGAACAACCGACACCACTGA

R47 TniGRP2 *Tetraodon nigroviridis* from Chromosome Un_random and EST CR688944, CR681433

1 M C W A Q G L R L S L P A L L L
 1 aaaaccctcaagATGTGCTGGGCTCAGGGGCTCCGACTCTCTTTGCCAGCCCTCCTCTCT
17 L L T
 61 CTCCTCACCTgсctcctcacctgtgagtacacctggtctgгctcagсgсaggcaaccggg
20 F S S
 121 ccagacgactaaattcaccctatttttacctcтtttgтcttccttctgtagTTTCCAGT
23 V A E N A E Y K N T R R A Q P N
 181 GTGGCTGAAAACGCAGAGTACAAGAACACAAGAAGAGCGCAACCCAACGgттctcctcct
 241 cctccgссggggгctgсctcctcctcctttttcgгttgtcgctgtaccccatcctgtcctc
39 G P G R K V F V
 301 cctgtgтаaccatggcaaccсgtcctctgccccagGGCCGGGGCGGAAGGTGTTTGTGC
47 P G S D A S D F F T R S A R R S G R Y Y
 361 CGGGGTCCGACGCTCCGACTTCTTACACGCAGCGCTCGCCGCTCGGGCCGCTACTACG
67 A E L R
 421 CCGAGCTCCGAGgtaccgссgctcтtсgtcтtсctcacгсgсcaagтаaacaggcaagac
 481 гcagctaatgсgacacacctgagctccaagaggagtcagcaaacacttttсcagcaaaсa
 541 cacacatctggagagcagctgacacacggaattctgctgagtgгttсgatcgtтctcat
 601 ttaaаacagggгtcagctgгttgсgtctgaaaaccaggtgtttttaacgagtgсagctag
 661 ttttgaacgacctgtgacaggaagccacctaacagggaggaaaaaaacaaaaaacagaa
 721 aaaaccсactgctgaccaagcaaaaaccaaagaaaaaggaggagtgaaacctaaaacag
 781 gtggacaggagcgсcacacgсcacacacacacacacacacagcagacggtagcagg
 841 agtcacaggсcagctгgгaggaagcttсctctcgatacaacgaacttcttсactactagg
 901 atacacacacacacacacacacacacacacacactcagaaatagggtgtttttgttсa
 961 ctctaаacagctcctgtatcagttсactgtagaactcтttgttсtgaggagaattagag
 1021 гcagctgсcagaggaaaaactgggaaaaacttttсctggaagagaatgaaсtatgtgaaa
 1081 ggtggagtgгtgtaaaaaacacacctсggссcagaacgacaagaacacctctgtсgttt
 1141 ttttgtttttttaatgaaaaacacagtttctgсcttaaaggattttgсacгсcctcctсc
71 A E Q Q V Q T S A G R R
 1201 tcctctcctctctctctcctccagCCGAGCAGCAGGTCCAGACCTCCGCCGGCAGGCGAT
83 W R E R D E E R G S A Y E T Y A E E R R
 1261 GGAGGGAGCGCAGCAGGAGGAGGGAGCGCCTACGAGACCTACGCGGAGGAGCGGCCGCG
103 D
 1321 ACGgtgagggggggggggggcgгgttcgсссggtcgгссctcgсgtgtgaaaaacccccaaa
 1381 gctctcaaaggсgгaggtgtсgtсggggссcaattgaggссctсggggссcctgggссcaca

1441 gcggaacgctccaaggtgtccattagcggttccccgagggcgtgggcctcctctgcggc
 1501 cgtccgtctgttgccacgggaactaaaaccagcttttcagcaccgggaaagggcagccgt
 1561 aaaaaccttattggatttttctaaaaacaaaaaaagggggatgaagagccagccagctt
 1621 cttttaccgcctgcttctgcaaggccgattgagtcgcggttgctgccattatgtgcca
104 **E R K E Q T R**
 1681 tttccaacttttccatcctttcctgatctttatccacagAGCGGAAGGAGCAGACCCGGG
111 **E R S E Q F R E F R S D G L R A R Q Y W**
 1741 AGAGGAGCGAGCAGTTCGAGAGTTTCGCTCCGACGGCCTGCGTGCTCGCCAGTACTGGT
131 **F H *****
 1801 TCCACTGAgcaaaaaaaaccatttaccctactgagctaactggttccagtcctgatac
 1861 ctttaaggtccagctcccgtcccagtgctccttcgtttttccagattggatgcatgcat
 1921 tgaacgcagcacgggattagaagccgctcgggcgtctgtccttggtgacaaa

R48 TheGRP *Tupaia belangeri* from WGS AAPY01134443, AAPY01134444

1 **M T W R Q V L L L S C V S A V V L L S**
 1 ATGACCTGGAGACAGGTCCCTCCTGCTCCTGCGTCTCAGCCGTGGTGCTCCTGTCCAgt
 61 gagtatgggaggggtcaggtggatcctgtcagtaacacagtaagccttaccttacacaggt
 121 cagtggttgaaagtggaacaggtaaaaaggagtgtgctccttggttaagatggctatgttt
 181 gggatgtgtgtgaagacgatgtaatacagaaaaagcagcaagaaagaaaaagtagggagc
 241 atcttccagctcctgtccagcttacctgggtgggttctcgggaagatcagctcagtggtg
 301 gtactgagcgtcgcaaggtcccacaccagggcctgagagggatcatggaggccaagtcca
20 **M L Q**
 361 ggctcgtgcccgtggtggactgcagccttcaccctgtgccccttgctcccgcagTGCTGCA
23 **E G T C A S V G T R Q A A G E E A Q E**
 421 GGAGGGCACCTGTGCTTCCGTGGGCACCAGGCAGGCAGCAGGAGAAGAGGCCCCAGGAAGg
 481 tgagtgcagggaccacacacagggcagatagggccggctccccgggcagctggtgctgac
42 **D V K Q K I F M Q E S E A S**
 541 tggcctcctctgattttcagATGTGAAACAGAAGATTTTCATGCAGGAATCGGAGGCCTCAA
56 **N F L R K R G K R S P K S R D E V N**
 601 ATTTCTCAGGAAGCGTGGCAAGAGGTCCCCAAAATCCAGAGATGAGGTCAATGgtaagg
 661 atgctgggggcctgccttgcacccctggaagtgggcccagagggtaggggatattgggacc
 721 cagggctctacaaggttctcaggtgtcacctgactgcagctgggaatgagaaatcccac
 781 ctgtttccttatagtggtatcccaggttgggctgaaaacatcattagggcaaggggcaaaa
 841 aaggtcagagccgcggcaaggtgactcagcagtgaaaatgtgcagaagagctgcatatt
 901 ccagctctagaagggacatgacacctcactgtgtgctccttggggcttggcacagcagac
 961 tcaactataatagagcaaccggcattgctgaggggaagagacagggcactggatgctga
 1021 catgtgtgggtttggtgacagctttgctgctaagtggctccagccacttctctctttgg
 1081 ccctaatttccttatttatacgccttgaaagagctgtattcagccagcagagttattht
 1141 aaattttaatttctgatgcatttgtgtaaatgggtctcccaccagcgggctgttggttt
 1201 catggcccctggtccatggctttaccactgcagcgccttgcacccttgacctgcagaga
 1261 cccatgaagcatttgaggttctgcccctaaactcacttccaagactcagctcggac
 1321 agtcccaactgagtgcatggcttgattctttccttgggcatgtggatgaatgaactcttt
 1381 gtgttcctcggcacacactcagcaaggtgacttgtcagtaaaaaatagcaagactgtttt
 1441 caaatgatgggaaaggacagagatgaaaatgctttggagatcaacttcttttttctttt
 1501 tccaactggatcagtataaccataactaaggaaaatctccaggcctcatatgacttgggat
 1561 ttaaaaattagccaatttcaagaaactgaaaagctgtgatgaaggttgagaggttctt
 1621 gattgaaatcagagaagcaacctcttggcagactttcagggcaaacgggcacaactttaa
 1681 ggcaggcaaatcttccatcctttgaaagtggactcggactgtgaggtgcagagtgagcc
 1741 tgagctctcatcccttgacagaggggacggtgctgtgtgtctggccgtcatgggagggcc
 1801 aggacagcctggggaacccttgcactgcacacatgtatctgctgtcatttactccc
 1861 tggctgggcaggaggacagtgagtgctccttaggttagatagtgggcaggtggcccttc
 1921 aataaacttgaatttggaaaccagaagacaggcatctgacatctccaagcttctgggacaa
 1981 aagtgtggttactttaaggtgaaggagaatctgatgaacattatgttcttgagaaggaa
 2041 tacagcataatgatgtataggataaaaaatccgacttggggccagcggatggcatggtgg
 2101 ttaaggtgctggattcccatatggttaactgtggtttgaattctggaccagcagcttga
 2161 aatcatgccagggcagtggtgccccaaaatcctaggggagaatgttagaggagggattgc
 2221 agtgtggccattccccactcccgggggagatttctcactttccctctctctctctct
 2281 ctggcgagtgcatgtgtcctatggcaaaaactgagaattaaattgttcttattcactgct
 2341 acattaaagccctaattttgtggcacttccaaaaaaggcagtttaggattatthtcttct

2401 ttctgagtatgaaaggaatggaaaatgcttcttttaggatctggcatggctaattataccc
2461 ctgcttttctaaacactaagtactccttccatgacagcttcccgtattggggcagcatca
2521 tccctcccctatggtgatttgggggatgctgccatgaacgctgtcttctcagccaagagt
2581 ggagagtgaggagcctgggtctccaggctctggcccagcttgggtccaaccagctgtgtg
2641 acttccattaagtcactgcacatctctgagcctgagaaatgtgtgcatgtgggcaagggg
2701 gggggcatggggctgggctggactaccactccttcgactgaagtttctacaattatgt
2761 gagtaaaggtggagctctgggaaagaatgactcctcaggaatctgtgctaaccaatg
2821 acacataatggtgatttttttctaaaaaatatttattatatttattcactcatttattt
2881 taatttgaccagagagacacagagagagctagagagagagatacagagagggaaattaag
2941 aaagcaagtaccaggtccgggacttgaactgtggtcagtcagtgaggaggtccagcac
3001 cttaacactacaccacctgcccgtcctcccagacgatgtcgatttaaaaaaattttgc
3061 caaaggggcatgcccttgccaaagagagagaggcaggaagtgaaaaagcaccctgatgt
3121 gtggcatgccatgccataatccttctcattttctctttccttctgggatttggcacatg
3181 catgtttctcaagccgctgggtccggaactcaaccacatggtcagccatgtgggatccag
3241 ctgccttcaccatcatgtcacaggctggcccagataacttaatttttaactctgagttaa
3301 aaataataatagagggaccagcagttagaataatggctatgtcactggactctcatgt
3361 agtcaaccacggttcgagctccagacctgggtggcttaaactcacactgggctgtgtga
3421 gtgccaagatccctagaggagaacagattgcagtggtccatccccctgaggggtaatt
3481 tctcactttctgtctctttctgtctttctgggtgagtgcatgcgccctatagcaaaaacct
3541 cttaaaaaataataataataaagggccagcaggtggcctggcggtaaggtggctgg
3601 actcacacaaggtgactgtggttcttggcagcttgccttctcactttccttctctttct
3661 ctgggtcaacttcaaagaaataaaaataaataatgacaattaaaagataaaaataattatg
3721 taaaaataacccatataactataatagcaataattaatatttctacaatttatttatcaa
3781 tgtgagctacttactgacaagaaggatttgagaagctttctttttttattatttttattt
3841 attaatatttatttttaatttgaccagagacagacacaaagtgagaaagcaagccatca
3901 ggtccaggcattgaaactgtcgtcagccacgtgagagagtcagcactttaaccaccagc
3961 cacctgctggtcctggatttgagaagctttctagtgttacgctggacaaaaaaaattt
4021 gttgcttctttcaacaccatgtgtggctttcctcagtttcccttatcaaccaccacttc
4081 ctcttgcaaattgaaagtgggtggggcaacaagagcacgctcagtcctctgcctctaaca
4141 cgaagaaagtctaccatgcaatgtgaggcattccgagggaccagtttccctccaccag
4201 acacggcctgtttgccttcttgattctccagttgaagcatatgaaacctggcacagtg
4261 ctaaagtgggagggcaccactgtgcgggtgggtgaggctccaagtgaggcccaggtttgg
4321 tcccaacttacctaaacaggctgggtccagtggtgcgtgcctgtggtccaagctctctgg
4381 gaggctgggacagagcaatcgcaataggtgagacctagcaaaaacaactttcttgggc
4441 tggccaataggtcagtgtttaagcactgtgccttgggagttggacccttctgtggctaac
4501 tgtgctttgatcaccagcccagagatttgaaaaaccaccagatgcttgcacctgcatgc
4561 ctacatcctgacagggcagagaaagggaggaaaaagagttgcagagtcacatcca
4621 ttggggaccattcttctctctcgggctgcaagtgcagcacccttcacaattatata
4681 tatatgtgtgtgtgtgtacatacacacacacacatagtatacaaacacacacatacctt
4741 tctctctccctcccacactcccatttaaaccaaaacaagcttttgaatatagagtgctt
4801 taaatagtttccctccaggcaaccacagctatcatagatttttattctagcagtcataaaa
4861 ttgatgaatttgtttttatctttctctttaagtggattacaggctttttaataaagg
4921 ggatagaatctttctttgctcttttcttttttttaaggattttgttataaagtgtgtgt
4981 gcttctggagagacagagacagcaagagagaaaaatgagaaatcagcccctgaggaat
5041 agccacaccacaatcccttcttctccattttcctcttgggattttggacacgcatatgca
5101 cctggcataattttcaagctgccccctccaggacttgaactgtggttaacatgcggggc
5161 tccagtgccatgtgctggccccttcttacttttttaacctggagttaaatctacgtac
5221 atcctggctgtgataaggactcaaaaatggtgactatatttgaaggcttatgaatgtgc
5281 aattaactttaaatgggatcattcttttgtggcatttatttctgatcatgctatttctgg
5341 tccccaaatgacttagtagacttggacacaccactgactttatgactggagtttaaggtgc
5401 ttttctcctgggggctctgtgttatcccttgcaaatgaggtgggtgggattgtctgacc
5461 ttcccgatcctcaggatttgaagtctatgtcaggggtaaatcatttctcagtgaggtggc
5521 cacctcttccctctcacaacagcacagcggcccaacaagattcagtttctcacatgaa
74 **A**
5581 gtgtgttcccgtagatgccttctttctgggagcaactcttgcctcttttctttcacag**C**
75 **E S R Q K L R A D E L Q R E Y Y E E Q R**
5641 **GGAAAAGCAGGCAGAAAGTTGCGGGCTGACGAGCTTCAGAGAGAATATTATGAAGAACAGAG**
95 **N E F E N F V E E Q N D**
5701 **GAACGAATTCGAGAACTTTGTGGAAGAACAGAAATGATG**gtaagatctgtttggccagcgt
5761 cttcagggaggtggggctttgtgcaaaagttgcaggggtacacctccgattctcctccagg
5821 atttgagttggaggagcagaggaaggaagattcgtatttacaggagccttgaaaaataaa

5161 ggctgaataatacatacagacatatctatatattcctgtctgtctgtctgtctgtctatc
 5221 tatcatctcacattttatcgattcatctattcttgttttaagaacgggtgggtaatggg
 5281 aattctgttttagctttctgaggggtcttttaaacaccgagagccttgggatatctgctc
 5341 gcgctttaacgcgacagtgagtgacctaacagtgagtgacaggcagtccttgaactggca
 5401 tcaggagcctaattctataggttcacaaaggcgttattcagaaacatgtcttatcaaga
 5461 cagaaaaatcaggactttcttactcattaaaaactcccttctgctcttttttagcctttac
 5521 tatgaaacatttcaaacacatggaaaagtatatagtataacaaactctcatataaccatc
 5581 acccagaatcaggggttatcaagatcttctgcaacttgccttaccaccctttccccag
 5641 ttagctttaaaaaacataactttattttaagctaagaaacagtaagaaggaaaactta
 5701 ctcataatcccactcactcggaaattgacaatcatttccatgagtttttcaacagtatgggt
 5761 tgcagtctgtttttctgctgtctgtgattttggattctgtcttagttgggtctctggg
 5821 ccagtttctgcacgcggtcttctgcccctctgctggctgtacaggggaaggaaactgaact
 5881 gaaggcagggccccggctctccgctctcttggcaatcagctctgtgacgctcacctatctg
 5941 ggcctgatctgtattaaaaacgaggacttttagattcggcatcctctcaggcccttccagct
 6001 gggattctgtctgtcatccatgcacgcaggcacagtggtcatgtcacgtgtcacaggcg
 6061 gggggggggaggggctttggcggaactcgggtggctgccccagatcagagccctccatcc
107 **E Q E E R S R E A I**
 6121 tcacacgacgacttcatctctcgtccccagAACAGGAAGAGAGAAGCCGAGAGGCCATCG
117 **E Q W R Q W H S D G L Y P P Y L Y N R H**
 6181 AGCAGTGGCGCCAGTGGCACAGTGACGGCCTGTACCCACCCTATCTCTACAACCGCCACC
137 **H I *****
 6241 ATATCTGA

R50 XlaGRP *Xenopus laevis* from EST BC129771, EB470679

1 **G K Q V L F L S C A A A V V L L A V L H**
 1 GGGAAACAAGTCTTATTCTTAGCTGTGCTGCAGCAGTTGTGTTACTGGCAGTTTTACAT
21 **E G E S A A V R S K D D P A P D Q K E S**
 61 GAAGGTGAAAGTGCTGCAGTTAGAAGCAAAGATGATCCTGCTCCAGACCAGAAAGAAAGT
41 **L K S K I F M Q G S E A S N F F K K R G**
 121 TTGAAAAGTAAGATTTTTATGCAAGGATCGGAGGCTTCCAATTTTTTCAAGAAGCGTGGC
61 **K R S T K S Q D E I N A E N R Q R L S A**
 181 AAGAGATCAACCAAGTCTCAAGATGAAATAAATGCTGAGAATCGTCAAAGACTGTCAGCA
81 **D E R R R E Y Y E E Q R N E F E N Y V E**
 241 GATGAGCGCAGAAGAGAGTACTACGAAGAGCAAAGAAATGAATTTGAGAACTATGTAGAG
101 **E E Q D E Q E E R S R E Q I E Q W R Q W**
 301 GAAGAGCAAGATGAGCAAGAGAGCGAAGCCGCGAGCAGATCGAGCAGTGGCGCCAGTGG
121 **H Y D G L S P S Y L Y Q R Q N I *****
 361 CATTACGACGGCCTCTCTCCTTACTTCTATCAGAGACAGAACATTTAActtccatcc
 421 acaaacatttaacaatttttttaactcctgcccataatctgtcatccaacagtcaccgga
 481 tccaagtggaccatggatggctccgtgactattatagttaacaagttcttatgcttta
 541 ctgtatttcattcagggtcagtaaatgataagaacatgattttgtgattatgtagaaa
 601 aattgttttttttttctttaaataatatttgcttttgcagtagagtataaaatcttta
 661 tttagaaatatccagcactctcttgactattgctggtttctctgaaatatcacattcatt
 721 tgttattgtctttctcaacaggtaaattgtttttctgtcatattaattttgcactgta
 781 tgtgtaaatttatgactgaaaaaaaaaaaaaaaaa

R51 XtrGRP *Xenopus tropicalis* from scaffold_138 and EST CX378239, CX315935, CR412599, CR412598, CX315934, CR576943, CR582542, CR572120, CR582541, EL713897, DR895794, BX719072, CX397009, BX709969, EL700709, EL851191, CR588206, DR900239, EL700708, EL700687, BX733412, CN119115, CX401155, CX401154, EL851192, EL703605, BX705234, CX381247, EL703604, CR412143, BX709968, BX705235, CX397008, AL637118, CX369023, CX369022, BX733411, CR581295, CX344282, EL857309, EL857308, CR576944, EL713896, CX344281, EL706365, CX396307, CX396306, AL673362

1 **M K R N Q V L F L T**
 1 aattttacaggacaagttaaaaccagcaaggATGAAGAGGAATCAAGTCTTATTCTTAC
11 **C A A A V V F L A**
 61 CTGTGCTGCAGCTGTTGTGTTCCCTGGCTGgtaagtacaaacttgttataatgtttgtaa

121 t g t a a t a a t g t a t t g g a a t g c a a a t c a t t a t t t a a a a t a a t a t t a g t g t c c t t g c t a t a t
181 t t g c a c t t g c t t g t a a g a t t t a g g t t t t a c t g c t a g a a t a t a a a t g t t t t g c t c c t t g t a
241 g c a g t t g c t a a t t g a a t g g g c a t g g a a c a c t g t t a a t t a g a t a g g a a c a a g t a g t g g t a
301 t t t g c t c t t a g t t c a t g t t a t g c a g a c a c t g c t g t a t a c t g c t g t c t g t g g t t c a t t t a c
361 a t a t g a a g a c a c t a a a g t c t t t t c g c c t g t g a a a a t a a g t t g g a c a a g t t c t g c t a g t g t
421 g t a a c t a t a g t g g c a t g a c t g t g t a c a c c t t t g c c a a c g c c t g g c a c t g t a g g c a a t a g t
481 t t t a a a a g t g t a a g t t t g a g c t g c t c c t t a c a t t a g t a c a t a c a g a c a a t t a g c a g a a g a
541 a t t g t t c c c c a g g g c t a a c t t g t t c t a g g a a t a g g a a c t c t t t a t a a t t a c t g a c t a a t g
601 t g c t a a a g c t t t g c t t t g t c t c a c a g a a g t g c a a a a t a g t g t a a c t t g g g a a t c t g c c t c
661 t t a a t t t g c c c t a g g g g t g a g c a a g t g a c a a a a t g t g t t t t g c t g t g t g c t g a t t t
721 t a t t t c c a t c c t g t g t t g t a t g c c c a t a a g g c t t g t a t t a a g a a a t t a c c c a t t t g c t c a
781 t c g t g g g g g t t t a t t a a a c t g a a a t t c c c a g c a t c t c c c g a c a g c t t a t g g t t g a t a g a t
841 a g t t a t t t g a t t t g t a g t t t a g c a a c a t c t g g a g g a c g g c a t g a t g t a c a t t t t a c a g a t
901 g c t g a c t t g c a a a c a a a a a a g c t a t t g c a t g c t g t a t a g a a t c c t g g c a g t t g t a g t a c
961 a g c a g c a a c a g a t a g c c a a t g g g t t g g a c a a g a t t t t t a a t t g a a t g t a c a c a g t t t a g a
1021 t t t a a a a c a c a t a t t t t a g c t t a a t g t a a t c a t t g g t g a c a t a c a g a a a a a a t a a t t a t
1081 c t t g t g a t g g g c t g c t a t a t a a a g a t a t a t g t c t g c t a t t g c a g t a a a t t g g t a t a t t t t
1141 a g a a g c a c t g a t c c a t a c t c t c c c g g t c a t a c g c a c c c g g c c a t a g g c t t a a t t g c t t g
1201 t g t a t a a c a a g c c a t t t c a g a a g t g a t a t t t t a g a a g c a c a c c a g a t a t g t t t t a c a a c a
20 **V L H V G E S A A V**
1261 t c a t c t g t c t t t c c t g t g t c t t g c t t t t a g **T T T T A C A T G T A G G T G A A A G T G C T G C A G T T A**
30 **R S K D D P A P D K K E**
1321 **G A A G C A A A G A T G A T C C T G C C C C T G A C A A G A A A G A A A** g t a a g t t a a t a t t g t t t t g t g t t g
1381 t a c a g g t a t a a g g c a c a a t a t t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t
1441 c t a t c a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t c t a t
1501 c t a t c t g t t a g a a t g t c t g t c t g c a t c a c t t c t g c g a a a a t t g g t g t a c a t t a t t a t g t a c
1561 a a g a a g a c c c a g a c t a a c t a a g c t a t a g c a g t g a c a c c t c a a t a g g a a c a a c t t a t g a a
1621 t a t a t t c t a c a c a t a c t a a c a t t t a c t t g t g g a g a t g g t c a t a g t g t t g a a a a a t t c a t t
42 **S L K S K I F M Q G S E A S N F**
1681 t t t g c c a c c t t a g **G T T T A A A A A G T A A G A T A T T T A T G C A A G G A T C G G A G G C T T C C A A T T T T**
58 **F K K R G K R S P K S Q D E I N**
1741 **T T T A A G A A G C G T G G C A A G A G A T C A C C C A A G T C T C A G G A T G A A A T A A A T G** g t a a g t c t g t t
1801 t g c t t c a t g g a a a g a t g t t t t t c t t c c c t t c c t g c a g t t t c t a g g a t t c c t a c t g c c t c t
1861 a t t a a c a t g t a t t a c t g a a a t g a a t g t g t a t g t t t c c t g c a g g c a c a g a g a t t a c t c t g a
1921 a t c a a a a a g c t t g t t t c a t t a c a c t g a g a t g a g t a a t t t g t g c t g c c t c a t t t t t t t t c c
1981 t t c t a c c t a a a g c a t c a g t t g t a c a t t t t c t t g g c t c t t c t t c t a t a t a a a t a g a a t g
2041 g c t t t t a t t a t a t g t c c t t a c a t a g g a t a t t a g t a g g a a g g a c a a g a c a a t t g c t a t t a g
2101 t t t g g t g g g c t c a g g a g g a c c a c t t t c c t t g c a g g g c t a c c a t c c c a g a t a a g t a g g t
2161 c c a g t a c a a c a a g c a g g g c t a c a g a t a t a g a g a a t a g g a c c a c a g a g t a t g c a g g a a g
2221 t c t t t g t c t c a g t t c t a a t a a t g t a a a g c c a a g t c c a a c c t a c a a c c c t t c a g c t a a t g t
2281 t g t a t t a c a g c t c c c a g c a c t c c t c a a t a g c t c a a t a g g a g t t a t t c t t a a a a c a c a t g a
2341 c a a c c c a c a g g t t t g a c a c c c c t t a g g g t g t a t a c t a t a c t g t a t g t a a t a a t t g c a a t t
2401 g c t t c t t t t a g t c a c a t t t t t c a t t g c a t g g a g c c c a a g a c a a a t g t c c t t a g t a c c c t
2461 a c t c t a a a a c t g g c c t t g a t a a c t a g g a c a t t g g a g c t c t t a a g c a a a a t g g t t a t t c t
2521 g t g t g c t a g t g t t a t a g a a t a c a c t a t t t t a t c c c c a c t a a t c a c a c t g a t g g c c t g a t g
2581 g a a a t g a t t g g a g c a t a a t a c t t t t a g a a c a t t t t a a t c a a a c a a t g t c a g t g c a c a t
2641 a g t t t t t a a c a t a c t t t g c a g g t a g t g c a a g g a a a t c a g a t t t a c c t a c a g a a t t c a g t
2701 t g c a t t t a a a a a a a t a a t t t g g a a t a t g t c t t a g t a c a t c a a a a t g c a a t a t t c c t c t g c
2761 a a a c a g a g t a g c a c t c c c t c t g t t a a a g a g c g g t c a t t a t a t a g t c t g c c a t a g t t g g a a
2821 t t g c t g t t c c a c c g c a g a a t g c a c c t t t a t t c t t t a a a a c t g a c t t c a g c g a t g t t t a c g
2881 t t a g c t t c t a t a a t a c a g t g c t c t c a t t g g a a g g c a g t g t g a g c t t g t g t g t g c t c a c a
2941 g a g c a g c t c t g a g t c t c t g g t a t g t g c a g g a c a g t g t c a g t c c t c t g a a g g a g g t a c a g g
3001 g t a t c a t g g t g a a a a t c c c a a a c t g c t c t c c c c t t c a g c t c c t c t g t a c t g a g c t a g g c g
3061 t t a c a t t t g t t g a c c a t t t c t c t a t t t t t a g a c a a t t t a a t a c a t a t g a a a t a t g t t c t
3121 g c t t a a a a g a a a t a g a a a c t a g g g a t t c a c t g t a t c c a g g t t t t g t c a g a a t c c c a g c a
3181 c t t t t t g c c a a a t t t t a a t t t a g t t c a g t g a a a c a c t t a a g t g t g a t g t a a c t t t a a a g g
3241 g g a c c t a c c a g c c t a t g a a a t t a c c a a t c c t c t t c t g t c a t g c t a a t t g a c a a a a a
3301 a c t c a a t t t a a a c a a a t t a g t c a g a c c t t g t t c t g t t t c a g a a t c c a a c a t c a c a g c a g g
3361 c a g g c a c c a t t t t g t g g a a g t t g c a t a a a a g g g a c c t t t t g c c t t t t g t t c c t a a a t c t t
3421 a t g t a t g t g c c a g a a a g g a g c a c t t g a g g c a t g t c c c c a a g c a t g t g a g g g a g g a g a a t
3481 g t a a g g g g t g g a a a a g a a g t g c a g t a t a a a t a t g a a a c c t a c a t t t t t t t t g g c c a a g c

3541 aatcatgtcatgtttaaattaaaggcttttattatatagctctgtgtctgggacaccg
3601 atcccccttaagtctctgtgacaatttattgttcactgatgatgctataaaagtaatttcct
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3721 tttagtagtattcatccaaatccaaatgtaagcatacaatgcatcactaaaaaacatcctta
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3841 aaactgatttctttttgtactgcatggctctttcagcataataatttattaacacaag
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3961 aggtaattactactgccccctgcaattccattgtttcacagttagtctatattggcag
4021 aaaaccagtctattgatgtctctcaatggcataggatgtaggggtgtatgagccaactg
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4801 tatataataactcatgcatacacaataatagaggaaactcttgggtctgtcgggtat
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6001 gcataaatataggagacatcttatgctgggcgcttatgagtacaccatgggcacaaaaca
6061 aggctttgtatattcctgaccccaggaacagctgttaggtctgctgtttctgggtgcta
6121 tagttgagggtgccccactaagggtttgtttcagtgtaaatattaactacagatttca

74 gatgacatttcttttcttctaaaatgcctattttag**CTGAGAATCGTCAAAGACTGTCA**

82 **A D E R R R E Y Y E E Q R N E F E N H V**
GCAGATGAGCGTAGAAGAGAGTACTACGAAGAGCAAAGAAATGAATTTCGAGAACCATGTA

102 **E E E Q D**
GAGGAAGAGCAAGATGgtaagatttagagctatctgaaagatatctcatacataccatac

6361 atacagtacataccctgttaaacaaggctaaaatgctattgtacagggaaatgtgactaaa
6421 atcttggtttcacagttaatactgtattttgtctttcacccaagaaagggtgcaaacagat
6481 gtacttcatatattttataaagaaatcatgtttgcaatgtatgcttatcttttgtaaaat
6541 tactgtacagtttgttttagagaataataggaactttcaggctccctgcatttcacattag
6601 atgaccaaataaacttccagaactttaccaaacagctaataatttgtgaccctgcattca
6661 cagtaaaaataaaaataaaagcatttacgaattatagggccagtttttagacagtcagggg
6721 ataagtggctctgcacagaggtgtataggaattttatataagaagacaactctgtaggta
6781 tgaaggatactctgtgtcctttatataatgatcactaaattctattgcttttatgatagga
6841 atcagatcttcacaccatacactcacaggaaataactgcaacacattttgcagggttagc

107 **E Q E E R**
6901 aggtttcttgatagttaactgatataataaatgtttttggacag**AGCAAGAAGAGCG**

112 S R E Q I E Q W R Q W H Y D G L S P S Y
6961 GAGCCGTGAGCAGATTGAACAGTGGCGTCAGTGGCATTACGACGGCCTGTCTCCTTCCTA
132 L Y Q R Q N I ***
7021 CCTTTATCAGAGACAGAACATTTAAttttccatcaaactaaaacatttttttaacaattat
7081 tttttttatcctacaaaaacctgttatccaataatcattgggagctaagtggaacactta
7141 aggcttgggtgcctttttattgttaacaagttcttatgctttactgtatttcacctatgg
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7261 cttatttacttttgcagagtagaatataaatgctatattaaagtaaccagcactcttttg
7321 gctattactggtttctctgagatgtcacattaaaattggtattgtctttctgaaaatg
7381 aaagggaaatgttttgcatgtcttattaaattttgctctgtatgtataaatttatga

Suppl. Fig 3

Subphylum	Class	Subclass	Infraclass	Superorder	Order	Family	Species	Acronym	common name
Vertebrata	Mammalia	Theria	Eutheria	Rodentia	Caviidae	<i>Cavia porcellus</i>	Cpo	Guinea pig	
					Muridae	<i>Mus musculus</i>	Mmu	house mouse	
						<i>Rattus norvegicus</i>	Rno	Norway rat	
					Sciuridae	<i>Spermophilus tridecemlineatus</i>	Str	thirteen-lined ground squirrel	
					Perissodactyla		<i>Equus caballus</i>	Eca	horse
					Artiodactyla	Bovidae	<i>Bos taurus</i>	Bta	cattle
						Suidae	<i>Sus scrofa</i>	Scs	pig
					Proboscidea		<i>Loxodonta africana</i>	Laf	African elephant
					Carnivora	Felidae	<i>Felis catus</i>	Fca	domestic cat
						Canidae	<i>Canis familiaris</i>	Cfa	domestic dog
				Insectivora		<i>Erinaceus europaeus</i>	Eeu	western European hedgehog	
				Primates	Callitrichidae	<i>Callithrix jacchus</i>	Cja	white-tufted-ear marmoset	
					Cercopithecidae	<i>Macaca mulatta</i>	Mam	rhesus monkey	
					Galagonidae	<i>Otolemur garnettii</i>	Oga	small-eared galago	
					Tarsiidae	<i>Tarsius syrichta</i>	Tsy	Philippine tarsier	
						<i>Pan troglodytes</i>	Ptr	chimpanzee	
					Hominidae	<i>Pongo pygmaeus</i>	Ppy	orangutan	
						<i>Homo sapiens</i>	Hsa	human	
				Cheirogaleidae	<i>Microcebus murinus</i>	Mim	gray mouse lemur		
				Xenarthra		<i>Choloepus hoffmanni</i>	Cho	Hoffmann's two-toed sloth	
				Chiroptera	Vespertilionidae	<i>Myotis lucifugus</i>	Mlu	little brown bat	
					Pteropodidae	<i>Pteropus vampyrus</i>	Pva	large flying fox	
				Lagomorpha	Leporidae	<i>Oryctolagus cuniculus</i>	Ocu	European rabbit	
			Ochotonidae		<i>Ochotona princeps</i>	Opr	American pika		
			Hyracoidea		<i>Procavia capensis</i>	Pca	cape rock hyrax		
			Scandentia		<i>Tupaia belangeri</i>	Tbe	northern tree shrew		
			Cetacea		<i>Tursiops truncatus</i>	Ttr	bottlenose dolphin		
			Diprotodontia		<i>Macropus eugenii</i>	Meu	Tammar wallaby		
				Didelphimorphia	<i>Monodelphis domestica</i>	Mdo	gray short-tailed opossum		
			Prototheria		<i>Ornithorhynchus anatinus</i>	Oan	platypus		
			Reptilia		<i>Anolis carolinensis</i>	Aca	green anole		
			Amphibia	Caudata		<i>Ambystoma mexicanum</i>	Ame	axolotl	
						<i>Xenopus tropicalis</i>	Xtr	western clawed frog	
	<i>Xenopus laevis</i>	Xla			African clawed frog				
Actinopterygii	Neopterygii	Ostariophysi	Cypriniformes		<i>Acipenser naccarii</i>	Ana	Adriatic sturgeon		
					<i>Cyprinus carpio</i>	Cca	European carp		
					<i>Danio rerio</i>	Dre	zebrafish		
			Siluriformes		<i>Ictalurus punctatus</i>	Ipu	channel catfish		
				Salmoniformes		<i>Oncorhynchus mykiss</i>	Omy	rainbow trout	
						<i>Salmo salar</i>	Ssa	Atlantic salmon	
			Osmeriformes		<i>Osmerus mordax</i>	Omo	rainbow smelt		
					<i>Takifugu rubripes</i>	Tru	torafugu		
			Tetraodontiformes		<i>Tetraodon nigroviridis</i>	Tni	spotted green pufferfish		
					<i>Oryzias latipes</i>	Ola	Japanese medaka		
			Beloniformes	Perciformes	Moronidae	<i>Dicentrarchus labrax</i>	Dla	European seabass	
					Sparidae	<i>Sparus aurata</i>	Sau	gilthead seabream	
			Gasterosteiformes		<i>Gasterosteus aculeatus</i>	Gac	threespine stickleback		
	<i>Petromyzon marinus</i>	Pma		sea lamprey					
Cephalaspidomorpha									

Suppl. Fig 4

Table with columns for species (e.g., Anole, Sturgeon, Platypus, Guinea pig, Opossum, Wallaby, Axolotl, X. laevis, X. trop., Hedgehog, Tree shrew, Cow, Dolphin, Lemur, Cat, Dog, Marmoset, Pig, Horse, Tarsier, Bat, Human, Orangutan, Chimp, Monkey, Rabbit, Mouse, Rat, Pika, Squirrel, Hyrax, Zebrafish, Smelt, Sticklebk., Medaka, Pufferfish, Torafugu, Lamprey), signal peptide, propeptide, mature protein, and residue positions (-60, -20, -1, +1, +20, +40, +60).

Table for GRP2 with columns for species (e.g., Zebrafish, Catfish, Pufferfish, Torafugu, Seabass, Trout, Salmon, Medaka, Seabream), signal peptide, propeptide, mature protein, and residue positions (-60, -20, -1, +1, +20, +40, +60).

γ-Carboxylase Recognition Site RXXR Gla Domain

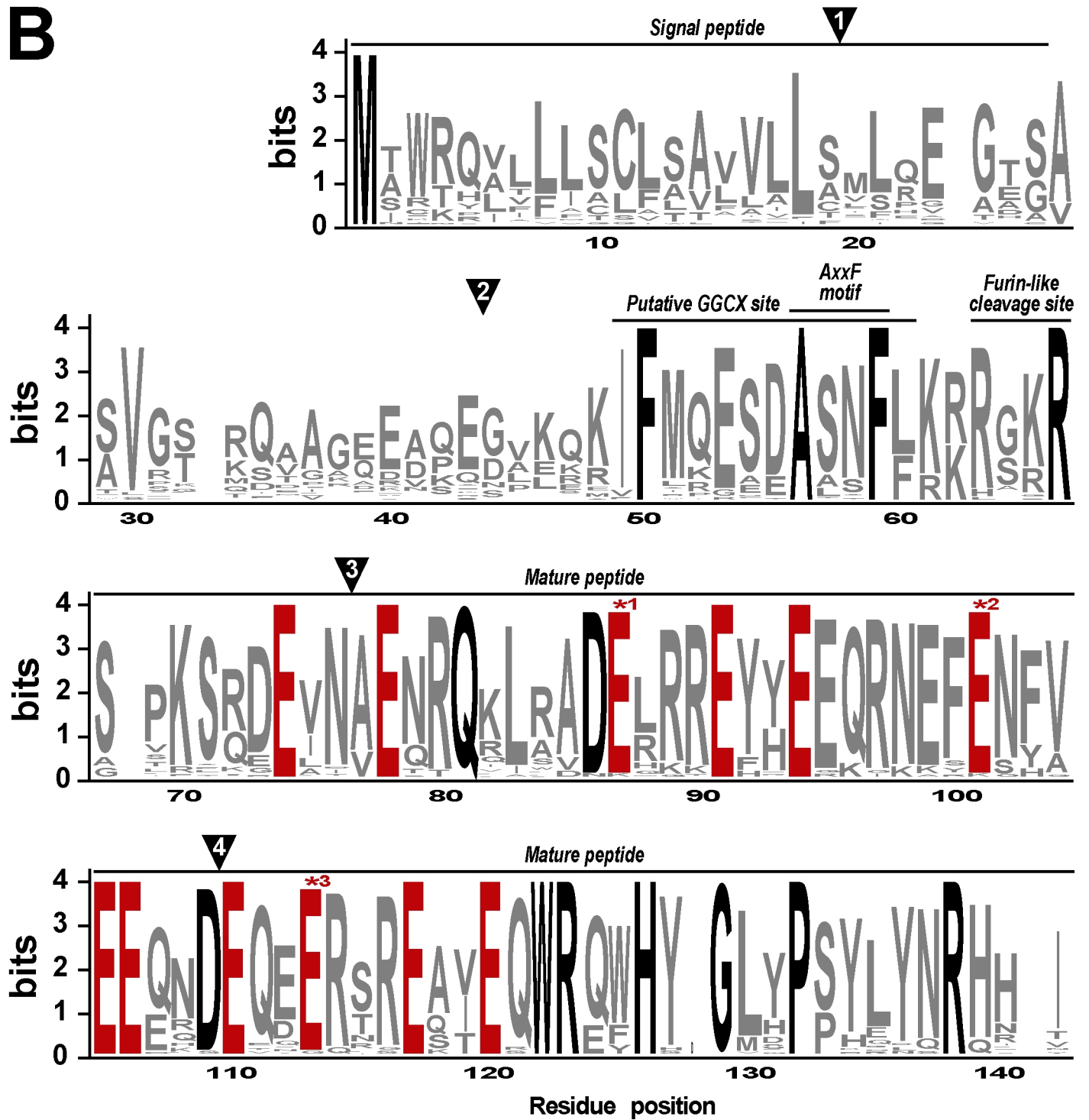
Suppl. Fig 5

>AcaGRP -STKSRDELNAETRQMLAADEQRREYEEQRNEFENFVEEERDEQDERSREQIEQWREYHYDGLDPPYLYNRHV-V
>AmeGRP -SPKAQGEINAENRQRLSADEQRREYHEEQRNEFENYVEEQDEQQERTREQVEQWRQWHYDGLYPSYHYQRHN-I
>AnaGRP -STKSKDEVNAENRQRLAADERRREYEEQRNEFENYVEEERDEQOERNREKTEQWREYHYDGLYPSYQYNRHH-I
>BtaGRP -SPRFQDEVNVENRQKLWADELRRREYHEEQRNEFENFVEEQNDEQGERSREAVEQWRQWHYDGLYPSYLYNRHH-I
>CfaGRP -SPKSRDEANAENRQKLRADELRRREYHEEQGNEFENFVEEQNDEQEERSREATEQWRQWHYDGLYPSYLYNRHH-I
>CjaGRP -SPKSHDEANAENRQKLRADELRRREYHEEQRNESENFVEEQNDEQEERSREAVEQWRQWHYDGLYPSYLYSRHH-I
>CpoGRP -SPKSRGDEVNVENTQKLRVDELRRREYEEQRNEFENFVEEQKDEQEERDREAVEQWRQWHYDGLFPPSYLYNRHH-I
>DlaGRP -SPRYYSERQAEQRVRLSANERRREYNEEQRNEFENYVEEERDEQNEREREKNEQVREYHYDGLYPRYHWFH----
>DreGRP1 -AVKTQDEINAEQRQRLAADERRREYHEEQRNKYNENYAAEEENDEQDERTREKTEQWREPHYDGLDPSYENRHT-I
>DreGRP2 -SPKTYEYYAEQRVKMSANERRREHLEEQSNEHENYLEEERDEQYERTRENEREQWREFNYDGGYPPYPHRRQY-Y
>EcaGRP -SPKSRDEVNAENRQKLRADELRRREYHEEQRNEFENFVEEQNDEQEERRREATEQWRQWHYDGLYPSYLYNRHH-I
>EeuGRP -SPKSRDEVNAENRQKARADELRRREYEEQRNEFENFVEEQNDEQEERSREATEQWRQWHYDGLHPSYLYNRHH-I
>FcaGRP -SPKSQDEVNAENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREATEQWRQWHYDGLHPSYLYNRHH-I
>GacGRP1 -GAKSQDEINAEQRQILAADEKRFHEEQKRNEFESYAAEEENDEQDERTRESTEQWREFHYDGMHPHPE-----
>HsaGRP -SPKSRDEVNVENRQKLRVDELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLHPSYLYNRHH-T
>IpuGRP -SPYSYTEYVAEHKLSAASERRREYEEQSNENYENHLEESRNEQYERNRENAEQWREYHYDGLYPPYPHRRPY-V
>MamGRP -SPKSRDEVNAENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLYPSYLYNRHH-I
>MdoGRP -SPKSRDELNAENRQQLRADEHRRREYEEQRNEFENFVEEQNDEQEERSREQIEQWRQWHYDGLYPPYLYNRHR-I
>MeuGRP -SPKSRDEVNAENRQQLRADEHRRREYEEQRNEFENFVEEQNDEQEERSREQIEQWRQWHYDGLYPPYLYNRHR-I
>MimGRP -SPSPKDEVNVENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLYPSYLYNRHH-I
>MluGRP -SPKSRDEVNAENRQKLRADELRRREYHEEQRNEFENFVEEQNDEQEERNREATEQWRQWHYDGLYPSYLYNRHH-I
>MmuGRP -SPKSRDEVNAENRQRLRDELRRREYEEQRNEFENFVEEQNDEQEERTREAVEQWRQWHYDGLYPSYLYNRQN-I
>OanGRP -SPKSRDEVNTRQQLKADEHRRREYFEEQRNEFENFVEEQNDEQDERNREQIEQWRQWHYDGLNPPYQYNRHH-V
>OcuGRP -SPKSREEVNAENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLYPPYLYNRHH-I
>OlaGRP1 -AVKSQDELDAEQRQVIAADERKREFHEEKRFNEFESYAAEDNDDEVNERSRESTEQWREFHYDGVHPPHEDNRHS-N
>OlaGRP2 -SPKYAELVAEQGMKRAASERRRFNEEQRNEYETYAEDDRDEINERSREMNEQLREYHYDGLYPRFHWFH----
>OmoGRP -AVKSQDEINAEQRQRLAADERKREYHEEQRNEFEGYAAEEHDEQDERTRESTEQWRQFHYDGMDFSK-----
>OmyGRP -SAKHEAEVLAEQRVRLSADERRREYDEQRNEFENYVEEERDEQDERTREKTEQWREFHYDGLYPRYPRGW----
>OprGRP -SSKSREANAENRQKIRADEMRREYEEQRNEFENFVEEQNDEQEERREAVEQWRQWHYDGLYPPYLYNRHH-I
>PcaGRP -SPKSRDEVNVENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREATEQWRQWHYDGLYPPYLYNRHH-I
>PmaGRP -SVKLPRETIAEQTQSLLADKRRTEYREEQIKARENFAEEERSETYEQTREATESWREYHYDGLYPSYLRNHRIPY
>PpyGRP -SPKSRDEVNAENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLHPSYLYNRHH-I
>PtrGRP -SPKSRDEVNAENRQKLRVDELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLHPSYLYNRHH-T
>RnoGRP -SPKSRDEVTAENRQKLRDELRRREYEEQRNEFENFVEEQNDEQEERTREAVEQWRQWHYDGLYPSYLYNRQN-I
>SauGRP -SPRSYAEQLQAEQRVVKIAANERWREYNEEQRNEHENYAAEARDESDEERSRETHEQIREYHYDGLYPRYHWFH----
>SsaGRP -SAKHEAEVLAEQRVRLSADERRREYDEQRDEFENYVEEERDEQDERTREKTEQWREFHYDGLYPRYPRGW----
>SscGRP -SPSRDEVNAENRQKLRADELRRREYHEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLYPSHLYNRHH-I
>StrGRP -SPKSRDEVNVENRQKLWADELRRREYEEQRNEFENFVEEQKDEQEERRREAVEQWRQWHYDGLYPSYLYNRHR-I
>TheGRP -SPKSRDEVNAESRQKLRADELQREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLYPSYLYNRHH-I
>TniGRP1 -GLLSQDEINAEQRQILAADERRREFHEERKRKESESHGEEEPDEEDGRTGSTERWREFHHDGMYPPRGNNRHH--
>TniGRP2 -SGRYAELRAEQVQVTSAGRRWRERDEERGSAYETYAEEERRDERKEQTRERSEQFREFRSDGLRARQYWFH----
>TruGRP1 -GLKSQDEINAEQRQVLAADERRRREFHEEKRRKFESHAAEEHDEQDERTSESTEQWREFHYDGMYPPEYNRHH-T
>TruGRP2 -SGRYHAELLAEQREKIFASERWREHNEKRSNVYENYAAEQRNEQTERSRETSEQIREYHYDGLYPRRYWFH----
>TsyGRP -SSKSREEVNAENRQKLRADELRRREYHEEQRNEFKNFVEEQNDEQEERIREAVEQWRQWHYDGLYPSYLYNRHH-I
>TtrGRP -SSKSREEVNAENRQKLQVDELRRKEHEEQRNEFENFVEEQNDEQEERSREATEQWRQWHSDGLYPPYLYNRHH-I
>XlaGRP -STKSQDEINAEENRQRLSADERRREYEEQRNEFENYVEEERDEQEERSREQIEQWRQWHYDGLSPPSYLYQRQN-I
>XtrGRP -SPKSQDEI-AE-RQRLSADERRREYEEQR-EFE-HVEEQDEQEERSREQIEQWRQWHYDGLSPPSYLYQRQI--

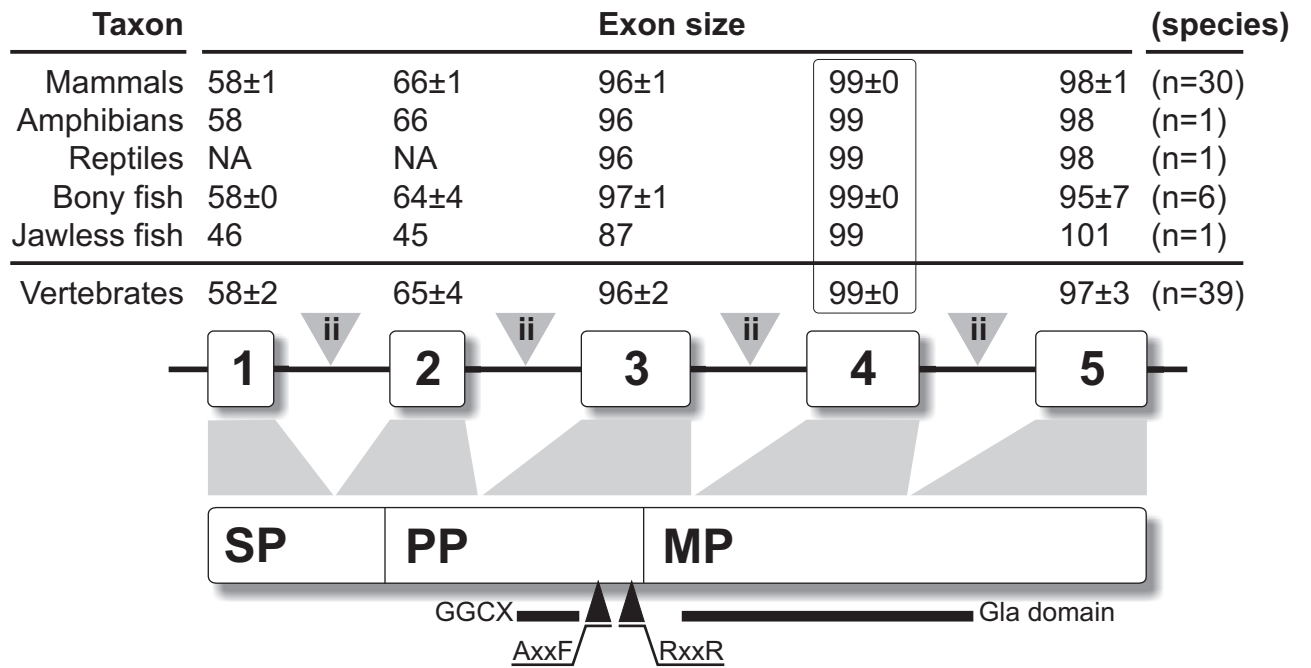
Suppl. Fig 6A

A

>AcaGRP -----LEKRVFIQESDASNFFKKRGKRS-TKSRDELNAETRQMLAADEQRREYEEQRNEFENFVVEERDEQDERSREQIEQWREYHYDGLDPPYLYNRHV-V
>AnaGRP1 MNWNQIIFISLIATVLIILAIANE-AESAAVRTDKSDIKREDGENMKKRIFMQSEATAFLKRRGRS-TKSKDEVNAENRQRLAADERREYEEQRNEFENYVEEERDEQQRNREKTEQWREYHYDGLYPSYQYNRHH-I
>OanGRP MIWKQIVFFSCLSAVLVLAQLD-VESATVGS-RQVAGDENKESLKRKIFMQESDASNFFKKRGKRS-PKSRDELINVENTRQQLKADEHRREYFEEQRNEFENFVEEQDDEQDERNREQIEQWRQWHYDGLNPPYQYNRHH-V
>CpoGRP MTWRHVLLSCLSAMVLLSMLQE-GTSASVGS-RQAAGEEAQEGERQKIFMQESDASNFLKRLSKRS-PKSRGEVNVENTQKLRVDELREYEEQRNEFENFVEEQKDEQEERDREAVEQWRQWHYDGLFPPSYLYNRHH-I
>MdoGRP MIWKQILFLSCLTTLVLLAILLEV-GEGAAGVS-KQEAGEEDKENLK-KIFLQEPDASNFFKKRKRKRS-PKSRDELNAENRQQLRADEHRREYEEQRNEFENFVEEQNDEQEERSREQIEQWRQWHYDGLYPPYLYNRHH-I
>MeuGRP MIQKQILLLSCLTAFVLLAMFEA-GEGAAGVS-KQVAGEEDKENLK-KIFLQESDASNFFKKRGKRS-IKSRDELNAENRQQLRADEHRREYEEQRNEFENFVEEQNDEQEERSREQIEQWRQWHYDGLYPPYLYNRHH-I
>AmeGRP -----RIRHEAS-FFKRRGKRS-PAQGEINAENRQRLSADEQRREYHEEQRNEFENYVEEQDDEQDERTREQVEQWRQWHYDGLYPSYHYQRHN-I
>XlaGRP --GKQVFLSCAAAVVLLAVLHE-GESAAVRS-KDDPAPDQKESLSKSI FMQGSSEASNFFKKRGKRS-TKSQDEINAENRQRLSADERRREYEEQRNEFENYVEEQDDEQEERSREQIEQWRQWHYDGLSPPSYLYQRQN-I
>XtrGRP M-KRQVFLFTCAAADVFLAVLHV-GESAAVRS-KDDPAPDKKESLSKSI FMQGSSEAS-FFKRRGKRS-PKSQDEI-AE-RQRLSADERREYEEQR-EFE-HVEEQDDEQEERSREQIEQWRQWHYDGLSPPSYLYQRQ--I
>EeuGRP MAWRHVLLSCLSAVLVLSVLQE-GAGASVRS-RQVVGQETQKGGEQKIFMQESDASNFLKRRSKRS-PKSQDEVNAENRQKARADELRREYEEQRNEFENFVEEQNDEQEERSREAIQWRQWHYDGLYPSYLYNRHH-I
>TbeGRP MTWRQVLLSCLSAVLLSMLQE-GTASVGT-RQAAGEEAQEDVKQKIFMQESEASNFLKRRGKRS-PKSRDEVNAESRQKLRADELQREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLYPSYLYNRHH-I
>BtaGRP MAWRQFLFI-CLSAVALLSMLWE-GAAVSVGP-RQVAGQEAQEDV-EEIFMQESDALNFLKRRSKRS-PRFQDEVNVENRQKLWADELRRREYHEEQRNEFENFVEEQNDEQGERREAVEQWRQWHYDGLYPSYLYNRHH-I
>TtrGRP MAWRQFLFICLSAVVLLSTLRE-GTAVAVGS-RQLAGHEVQEGVEGKIFMKESEDALNFLKRRGKRS-SKSREEVNAENRQKLQVDELKREHYEEQRNEFENFVEEQNDEQEERSREAIQWRQWHSDGLYPPYLYNRHH-I
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>CjaGRP -----AKQKIFMQESDASNFLKRRGKRS-PKSHDEANAENRQKLRADELRRREYHEEQRNESENFVEEQNDEQEERSREAVEQWRQWHYDGLYPSYLYSRHH-I
>SscGRP MAWRQFLFISCLSTVLLSMLQE-GTSASVGT-RQVAGQEAQEGVKEKIFMQESDALNFLKRRSKRS-PRSRDEVNAENRQKLRADELRRREYHEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLYPSHLYNRHH-I
>EcaGRP MACRQLLISCLLAVVLLSMLQQ-GTGVSVGT-RQVEGQEAQEGVEQRI FMQESDASNFLKRRSQRS-PKSRDEVNAENRQKLRADELRRREYHEEQRNEFENFVEEQNDEQEERRREAIQWRQWHYDGLYPSYLYNRHH-I
>TsyGRP -----SRRFFMRESASNFLKRRGKRS-SKSREEVNAENRQKLRADELRRREYHEEQRNEFKNFVEEQNDEQEERIREAVEQWRQWHYDGLYPSYLYNRHH-I
>MluGRP MAWRQLLVLVACFSATVLLCMLQE-GTASVGT-GQAGQEAQEGVQKIFMQESDASNFLKRRGKRS-PKSRDEVNAENRQKLRADELRRREYHEEQRNEFENFVEEQNDEQEERNREAIQWRQWHYDGLYPSYLYNRHH-I
>HsaGRP MTWRQAVLLSCLSAVLLSMLRE-GTSVSVGT-MQAGEEAQEDAKQKIFMQESDASNFLKRRGKRS-PKSRDEVNVENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLHPSYLYNRHH-T
>PpyGRP MTWRQAVLLSCLSAVLLSMLRE-GTSASVGT-MQAA-EEASEDAKQKIFMQESDASNFLKRRGKRS-PKSRDEVNAENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLHPSYLYNRHH-I
>PtrGRP MTWRQAVLLSCLSAVLLSMLRE-GTSASVGT-MQAGEEAQEDAKQKIFMQESDASNFLKRRGKRS-PKSRDEVNAENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLHPSYLYNRHH-T
>MamGRP MTWRQALLSCLSAVALLSMLRE-GTAPVVGK-TPAAKEEAQEDAKQKIFMQESDASNFLKRRGKRS-PKSRDEVNAENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLYPSYLYNRHH-I
>OcuGRP MTWRQVLLSCLSAVLLSMLRE-GTSASVSS-RQAARDEAQEGVQKIFMRESASNFLKRRGKRS-PKSRDEVNAENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREAVEQWRQWHYDGLYPPYLYNRHH-I
>MmuGRP MSWRRVILLSSLLAVLLCMLQE-GTSASVGS-RQAAAEQVQEGVQKIFMQESDASNFLKRRGKRS-PKSRDEVNAENRQRLRDELRRREYEEQRNEFENFVEEQRDEQEERTREAVEQWRQWHYDGLYPSYLYNRQN-I
>RnoGRP MSWRQVILLSSLSALVLLCMLQE-GTSASVGS-RQAAGEEVQEGMKQKIFMQESDASNFLKRRGKRS-PKSRDEVTAENRQKLRADELRRREYEEQRNEFENFVEEQRDEQEERTREAVEQWRQWHYDGLYPSYLYNRQN-I
>OprGRP MICRPVLLMCLWAVLLSALQE-GSGASVGR-RQAAPPEAQRGVQKIFMQEADASNFLKRRTKRS-SKSREANAENRQKIRADEMRREYEEQRNEFENFVEEQNDEQEERREAVEQWRQWHYDGLYPPYLYNRHH-I
>StrGRP -----KRKIFMQESDASNFLKRRSKRS-PKSRDEVNVENRQKLWADELRRREYEEQRNEFENFVEEQKDEQEERRREAVEQWRQWHYDGLYPSYLYNRHH-I
>PcaGRP MTWRPVFLSCLSAIVLLSLLRE-GASASVGT-QLAAVEEDQEGTKQKIFARESDASNFLKRRASRS-PKSRDEVNVENRQKLRADELRRREYEEQRNEFENFVEEQNDEQEERSREAIQWRQWHYDGLYPPYLYNRHH-I
>DreGRP1 MSWTQFALLTCLLVLSAITLFDG-ADSAVS--DK--RDVNPQGALRKIFMPEADAASFRRRSRRA-VKTQDEINAEQRQLAADERREYHEEQRNEKYENYAAEENDEQDERTREKTEQWRREFHYDGLDPSYENRHT-I
>OmoGRP1 MSWTHAAVL-LLTVLLALSLSHE-ADSVAVPDDKDTTKALDPQGLRRI FMPEADAANFRRRRRRA-VKSQDEINAEQRQLAADERREYHEEQRNEFEGYAEHEHDEQDERTRESTEQWRQFHYDGMPSK-----
>GacGRP1 MSWTYATLLALLTVLLALCWSPE-AESAAVHS--STGIAKEPQGLKEIFMKEEDASNFFRRRSRRA-AKSQDEINAEQRQILAADEKREFFHEQKRNFEFESYAEENDEQDERTRESTEQWRREFHYDGMPPHE-----
>OlaGRP1 MSWTHATPLALLAVFVLLSSSPE-ADSAAVAS--STGVSVDPPQGLKRI FMKEADAANFRRRRSRRA-VKSQDELDAEQRVIAADERKREFFHEEKRNFEFESYAEEDNDEVNERSRESTEQWRREFHYDGMPPHEDNRHS-N
>TniGRP1 MTRTYATLLGLLALFTALFCSFGDTHSAAVSQ--SAGRQRDPAGPLEMIFMKEEDASNFFRRRSRRLKSKQDEINAEQRQILAADEKREFFHEEKRESESHGEEEPDEEDGRTGESTERWREFHHDGMYPFRGNRRHH--
>TruGRP1 MARTYATLLALLAVYITLFSPEGTHSAAVPQ--STGGQRDPSPGLKMI FMKESEASTFRRRRSRRA-LKSQDEINAEQRQVLAADERREFFHEEKREKRESESHGEEEPDEEDGRTGESTERWREFHHDGMYPFRGNRRHH--
>PmaGRP MTRTALSLL---VLVLFSCIQE-GRAATLMK-TI-----QDFNAVVRREETAASFL--RPRS-VKLPRETIAEQTQSLADKRRTEYREEQIKARENFAEEERSETYEQTREATESWREYHYDGLYPSYRLNRHIPY

B

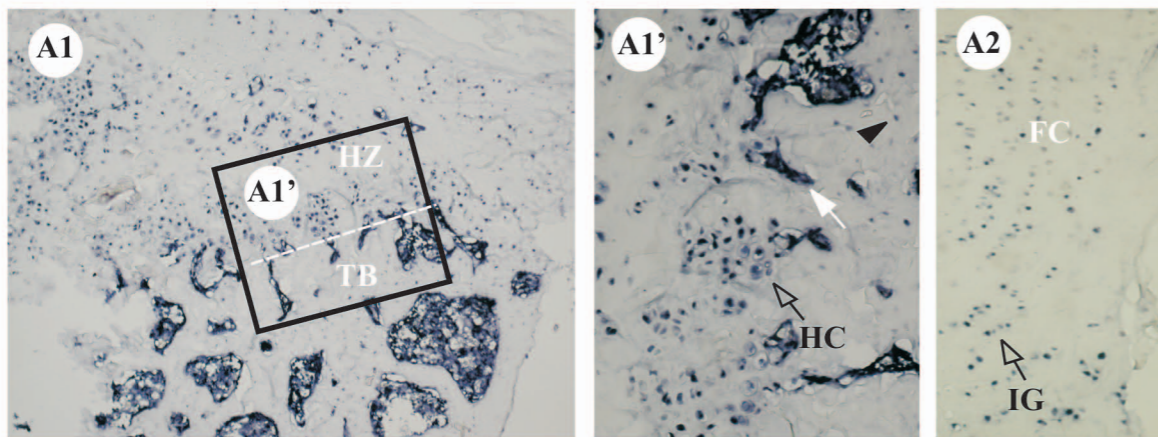
Suppl. Fig 7



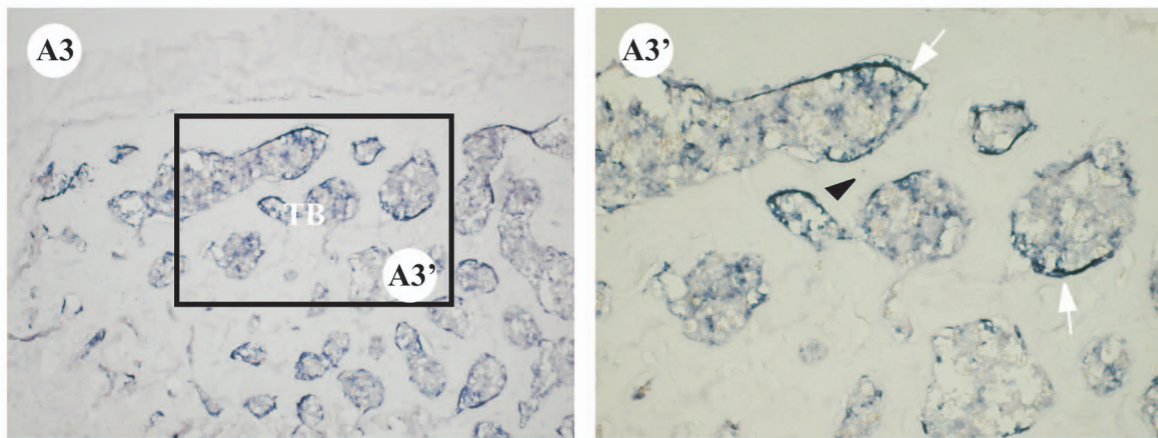
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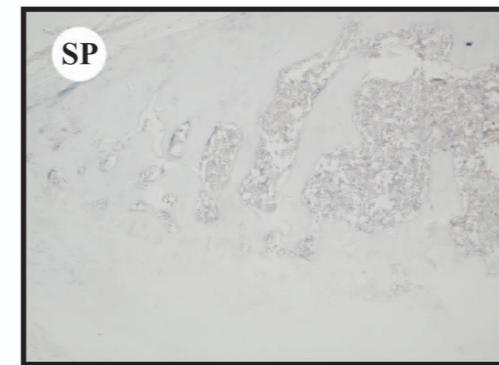
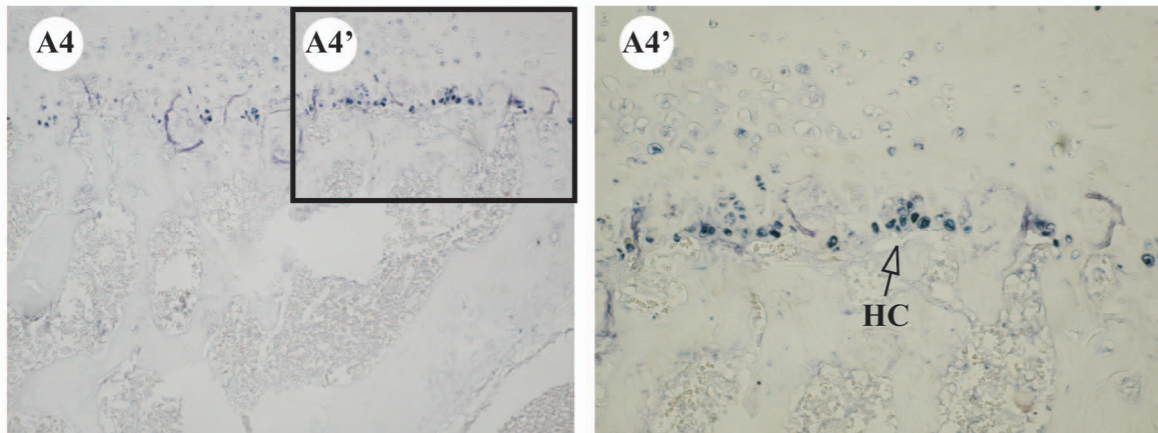
GRP

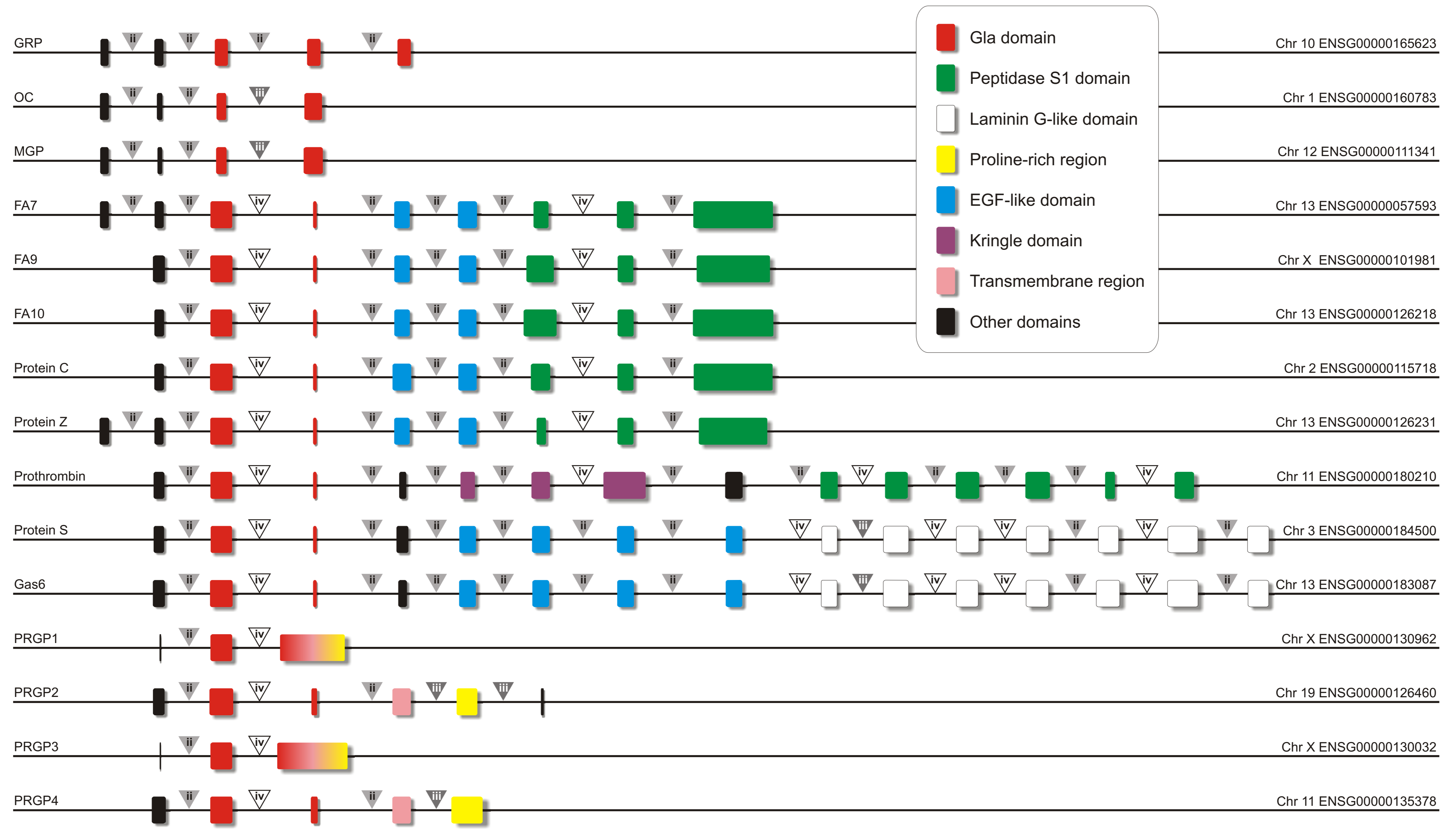


OC



MGP





Exon
600 bp