

SEQUENCE LISTING

<110> AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH

5 <120> POLYPEPTIDES, NUCLEIC ACIDS AND USES THEREOF

<130> P000177WO1

<150> 61/911,276

10 <151> 2013-12-03

<150> 14/496,600

<151> 2014-09-25

15 <160> 197

<170> PatentIn version 3.5

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<213> Artificial Sequence

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25 <223> Description of Artificial Sequence: Synthetic
ELABELA polypeptide signature sequence

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Ser Arg Val Pro Phe Pro
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5 tatcgccatc tcaaactttg aaaaagttgg agagaccgag agctggctag aactgcgcgt
120

cttctatata actcaactta tacgagatct gagaacactt gctgagagcg acagacacat
180

10 aagaggatth ctacagtccg ttacctgcac atccgacaga atttatcgte tgaggaaccg
240

cggacatcct gtgaggagag tcgagtctgc gccgcggacc aaaccacct gagcatcacc
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15 atgagattct tccaccgct gtatctgctg ctgctgctgc tgacagtgct ggtcctcatc
360

20 agcgcagata aacatggtac aaaacacgat tttctcaact tgaggcggaa atatcgaga
420

cacaactgcc cgaagaaacg ctgtctacct cttactcca gactaccttt cccttgaggt
480

25 tttatgatgc tccgggcaag cattaagaaa aaccaaagac cagccttgga ttggaaatga
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gaaaagatth atgtcagatg tgccgaggac tgthttattc gcacatgtat tgtaatcaaa
600

30 gccatgthtg tcacttctgt agcagaagtg thttttgtth tgthttgtth thtaaatgaa
660

tgtaagtga tgagccatgg agatcctact gctgccaac atgctgcaaa ctcatcactc
720

35 aatcaggthg agttggagca gaatcattgt aaatagtga gactgaatga aatgtgtth
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40 tatgtaagth atgcacttca aatgtththt tattatcttg atttattaaa agtgtattgt
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Anti-ELABELA shRNA sequence A oligonucleotide

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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
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 35 40 45

10 Ser Arg Val Pro Phe Pro
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 ELABELA polypeptide signature sequence

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 ELABELA polypeptide signature sequence

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 <212> PRT
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 <212> PRT
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 1 5 10 15

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 <213> Rattus sp.

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 1 5 10 15

30

<210> 63
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<210> 72

<211> 16

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10 <213> Ambystoma sp.

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Cys Ser Leu Arg Arg Cys Met Pro Leu His Ser Arg Val Pro Phe Pro
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<210> 73

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<212> PRT

20 <213> Oryzias sp.

<400> 73

Cys Leu His Arg Arg Cys Met Pro Leu His Ser Arg Val Pro Phe Pro
 1 5 10 15

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<210> 74

<211> 16

<212> PRT

30 <213> Callorhinchus sp.

<400> 74

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<210> 75

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25 <213> Rattus sp.

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Leu Leu Phe Ile Thr Glu
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Leu Leu Phe Ile Ser Glu
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Leu Leu Leu Ile His Gly
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Xaa His Ser Arg Val Pro Phe Pro
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40 <210> 104
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<210> 112
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primer

<400> 117

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5 <210> 122
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primer

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<210> 125
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<220>
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primer

<400> 125

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21

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primer

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primer

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<210> 129
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primer

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21

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primer

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<210> 132
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oligonucleotide

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19

<210> 133
50 <211> 16
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<220>
55 <223> Description of Artificial Sequence: Synthetic
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<400> 133

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16

5 <210> 134
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15

<210> 135
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21

<210> 136
35 <211> 22
<212> DNA
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22

<210> 137
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primer

<400> 137

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19

5 <210> 138
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primer

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primer

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<210> 140
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primer

<400> 140
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primer

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<400> 141

tcacactttg gtggccagc
19

5 <210> 142
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10 <220>
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primer

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19

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primer

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<210> 144
35 <211> 20
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<220>
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primer

<400> 144
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<210> 145
50 <211> 43
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<220>
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primer

<400> 145

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43

5 <210> 146
<211> 43
<212> DNA
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10 <220>
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primer

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43

<210> 147
20 <211> 23
<212> DNA
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<220>
25 <223> Description of Artificial Sequence: Synthetic
primer

<400> 147
30 atggaggaag gtggtgattt tga
23

<210> 148
35 <211> 22
<212> DNA
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<220>
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primer

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22

<210> 149
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primer

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19

5 <210> 150
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primer

<400> 150
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22

<210> 151
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<212> DNA
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primer

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23

<210> 152
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primer

<400> 152
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22

<210> 153
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50 <213> Artificial Sequence

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oligonucleotide

55 <400> 153

acacgtaccg ggactatga
19

5 <210> 154
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10 <220>
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oligonucleotide

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19

<210> 155
20 <211> 19
<212> DNA
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25 <223> Description of Artificial Sequence: Synthetic
oligonucleotide

<400> 155
30 gacctctgcg cctaattat
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<210> 156
<211> 57
35 <212> DNA
<213> Danio rerio

<400> 156
40 atgagattct tccaccgcgt gtatctgctg ctgctgctgc tgacagtgct ggtcctc
57

<210> 157
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45 <212> PRT
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<220>
50 <223> Description of Artificial Sequence: Synthetic
polypeptide

<400> 157
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1 5 10 15

55 Lys His Gly Thr Lys His Asp Phe Leu Asn Leu Arg Arg Lys Tyr Arg

53

20

25

30

5 Arg His Asn Cys Pro Lys Lys Arg Cys Leu Pro Leu His Ser Arg Val
35 40 45

Pro Phe Pro
50

10

<210> 158

<211> 29

<212> PRT

15 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

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<400> 158

Met Arg Phe Phe His Pro Leu Tyr Leu Cys Gln Cys Trp Ser Ser Ser
1 5 10 15

25

Ala Gln Ile Asn Met Val Gln Asn Thr Ile Phe Ser Thr
20 25

30

<210> 159

<211> 7

<212> PRT

<213> Artificial Sequence

35

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 159

40 Met Arg Phe Phe His Pro Leu
1 5

<210> 160

45 <211> 33

<212> PRT

<213> Homo sapiens

<400> 160

50 Gly Gln Arg Pro Val Asn Leu Thr Met Arg Arg Lys Leu Arg Lys His
1 5 10 15

55

Asn Cys Leu Gln Arg Arg Cys Met Pro Leu His Ser Arg Val Pro Phe
20 25 30

Pro

5 <210> 161
 <211> 36
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 <213> Unknown

10 <220>
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 1 5 10 15

20 Gly Arg Arg Lys Phe Arg Arg Gln Arg Pro Arg Leu Ser His Lys Gly
 20 25 30

Pro Met Pro Phe
 35

25

<210> 162
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 30 <213> Unknown

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<400> 162
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55 His Ser Arg Val Pro Phe Pro

55

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5 <210> 163
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 1 5 10 15

 35 Xaa His Ser Arg Val Pro Phe Pro
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 40 <210> 164
 <211> 24
 <212> PRT
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 45 1 5 10 15

 Leu His Ser Arg Val Pro Phe Pro
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 <210> 165
 <211> 24
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 55 <213> Peromyscus sp.

 <400> 165

56

Lys Arg Lys Val Tyr Arg His Asn Cys Phe Arg Arg Arg Cys Val Pro
 1 5 10 15

5 Leu His Ser Arg Val Pro Phe Pro
 20

10 <210> 166
 <211> 24
 <212> PRT
 <213> Rattus sp.

15 <400> 166
 Arg Arg Lys Leu Tyr Arg His Asn Cys Phe Arg Arg Arg Cys Ile Ser
 1 5 10 15

20 Leu His Ser Arg Val Pro Phe Pro
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25 <210> 167
 <211> 24
 <212> PRT
 <213> Mus musculus

30 <400> 167
 Arg Arg Lys Leu Tyr Arg His Asn Cys Phe Arg Arg Arg Cys Ile Pro
 1 5 10 15

35 Leu His Ser Arg Val Pro Phe Pro
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40 <210> 168
 <211> 24
 <212> PRT
 <213> Bos sp.

45 <400> 168
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 1 5 10 15

50 Leu His Ser Arg Val Pro Phe Pro
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55 <210> 169
 <211> 24
 <212> PRT
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<400> 169
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57

1 5 10 15

Leu His Ser Arg Val Pro Phe Pro
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<210> 170

<211> 24

10 <212> PRT

<213> Dasypus sp.

<400> 170

Arg Arg Lys Leu His Arg His Asn Cys Phe Gln Arg Arg Cys Met Pro
15 1 5 10 15

Leu His Ser Arg Val Pro Phe Pro
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<210> 171

<211> 24

<212> PRT

25 <213> Trichosurus sp.

<400> 171

30 Arg Arg Lys Pro His Arg His Ile Cys Pro Gln Arg Arg Cys Met Pro
1 5 10 15

Leu His Ser Arg Val Pro Phe Pro
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<210> 172

<211> 24

<212> PRT

<213> Gallus gallus

<400> 172

Arg Arg Lys Leu His Arg His Asn Cys Ser His Arg Arg Cys Met Pro
1 5 10 15

45 Leu His Ser Arg Val Pro Phe Pro
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50 $\langle 210 \rangle$ 173

<211> 24

<212> PRT

<213> Gekko sp.

55 <400> 173

Arg Arg Lys Leu His Arg Gln His Cys Ser His Arg Arg Cys Met Pro
1 5 10 15

Leu His Ser Arg Val Pro Phe Pro
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<210> 174

<211> 24

<212> PRT

10 <213> Anolis sp.

<400> 174

Arg Arg Lys Leu His Arg His His Cys Ser His Arg Arg Cys Met Pro
1 5 10 15

15

Leu His Ser Arg Val Pro Phe Pro
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<210> 175

<211> 24

<212> PRT

<213> Xenopus laevis

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<400> 175

Arg Arg Arg Ile His Arg His Asn Cys Phe Leu Lys Arg Cys Ile Pro
1 5 10 15

30

Leu His Ser Arg Val Pro Phe Pro
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35 <210> 176

<211> 24

<212> PRT

<213> Ambystoma sp.

40 <400> 176

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1 5 10 15

45 Leu His Ser Arg Val Pro Phe Pro
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<210> 177

50 <211> 24

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<213> Oryzias sp.

<400> 177

55 Arg Arg Lys Tyr His Arg His His Cys Leu His Arg Arg Cys Met Pro
1 5 10 15

Leu His Ser Arg Val Pro Phe Pro
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5

<210> 178
<211> 24
<212> PRT
<213> Callorhinchus sp.

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<400> 178
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15

Phe His Ser Arg Val Pro Phe Pro
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<210> 179
<211> 24
<212> PRT
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25

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1 5 10 15

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Leu His Ser Arg Val Pro Phe Pro
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<210> 180
<211> 24
<212> PRT
<213> Danio rerio

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<400> 180
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1 5 10 15

45

Leu His Ser Arg Val Pro Phe Pro
20

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<210> 181
<211> 23
<212> PRT
<213> Homo sapiens

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<400> 181
Arg Lys Leu Arg Lys His Asn Cys Leu Gln Arg Arg Cys Met Pro Leu
1 5 10 15

60

His Ser Arg Val Pro Phe Pro
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5 <210> 182
<211> 23
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<213> Peromyscus sp.

10 <400> 182
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1 5 10 15

15 His Ser Arg Val Pro Phe Pro
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20 <210> 183
<211> 23
<212> PRT
<213> Rattus sp.

25 <400> 183
Arg Lys Leu Tyr Arg His Asn Cys Phe Arg Arg Arg Cys Ile Ser Leu
1 5 10 15

30 His Ser Arg Val Pro Phe Pro
20

35 <210> 184
<211> 23
<212> PRT
<213> Mus musculus

40 <400> 184
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1 5 10 15

45 His Ser Arg Val Pro Phe Pro
20

50 <210> 185
<211> 23
<212> PRT
<213> Bos sp.

55 <400> 185
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1 5 10 15

His Ser Arg Val Pro Phe Pro

61

20

5 <210> 186
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 <212> PRT
 <213> Sus sp.

10 <400> 186
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15 His Ser Arg Val Pro Phe Pro
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20 <210> 187
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25 <400> 187
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 1 5 10 15

30 His Ser Arg Val Pro Phe Pro
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35 <210> 188
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 <212> PRT
 <213> Trichosurus sp.

40 <400> 188
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45 His Ser Arg Val Pro Phe Pro
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50 <210> 189
 <211> 23
 <212> PRT
 <213> Gallus gallus

55 <400> 189
 Arg Lys Leu His Arg His Asn Cys Ser His Arg Arg Cys Met Pro Leu
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His Ser Arg Val Pro Phe Pro
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<210> 190
 <211> 23
 5 <212> PRT
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 His Ser Arg Val Pro Phe Pro
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 <210> 191
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 20 <213> Anolis sp.

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 His Ser Arg Val Pro Phe Pro
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 <210> 192
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 His Ser Arg Val Pro Phe Pro
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 50 <400> 193
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 1 5 10 15

 55 His Ser Arg Val Pro Phe Pro
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<210> 194
 <211> 23
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 5 <213> Oryzias sp.

 <400> 194
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 His Ser Arg Val Pro Phe Pro
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 <211> 23
 <212> PRT
 <213> Callorhinchus sp.
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 1 5 10 15
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 His Ser Arg Val Pro Phe Pro
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 30 <210> 196
 <211> 23
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 <213> Oncorhynchus sp.
 35 <400> 196
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 45 <210> 197
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 50 Arg Lys Tyr Arg Arg His Asn Cys Pro Lys Lys Arg Cys Leu Pro Leu
 1 5 10 15
 55 His Ser Arg Val Pro Phe Pro
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