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Cys Val Thr Glu Val Ile Lys Leu Leu Ile Ser Val Gly Leu Leu Ala
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Lys Glu Thr Gly Ser Leu Gly Arg Phe Lys Ala Ser Leu Ser Glu Asn
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Val Leu Gly Ser Pro Lys Glu Leu Met Lys Leu Ser Val Pro Ser Leu
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Asp Ala Ala Val Tyr Gln Val Thr Tyr Gln Leu Lys Ile Pro Cys Thr
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Gly Leu Tyr Thr Ser Val Val Val Lys Tyr Thr Asp Asn Ile Met Lys
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Gly Phe Ser Ala Ala Ala Ala Ile Val Leu Ser Thr Ile Ala Ser Val
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Gln Tyr Val Ala Ile Ser Asn Leu Pro Ala Ala Thr Phe Gln Val Thr
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Tyr Gln Leu Lys Ile Leu Thr Thr Ala Leu Phe Ser Val Leu Met Leu
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Asn Arg Ser Leu Ser Arg Leu Gln Trp Ala Ser Leu Leu Leu Leu Phe
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Thr Gly Val Ala Ile Val Gln Ala Gln Gln Ala Gly Gly Gly Gly Pro
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Arg Pro Leu Asp Gln Asn Pro Gly Ala Gly Leu Ala Ala Val Val Ala
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Ser Cys Leu Ser Ser Gly Phe Ala Gly Val Tyr Phe Glu Lys Ile Leu
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Lys Gly Ser Ser Gly Ser Val Trp Leu Arg Asn Leu Gln Leu Gly Leu
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Phe Gly Thr Ala Leu Gly Leu Val Gly Leu Trp Trp Ala Glu Gly Thr
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Ala Val Ala Arg Arg Gly Phe Phe Phe Gly Tyr Thr Pro Ala Val Trp
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Gly Val Val Leu Asn Gln Ala Phe Gly Gly Leu Leu Val Ala Val Val
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Val Lys Tyr Ala Asp Asn Ile Leu Lys Gly Phe Ala Thr Ser Leu Ser
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Ile Val Leu Ser Thr Val Ala Ser Ile Arg Leu Phe Gly Phe His Leu
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Asp Pro Leu Phe Ala Leu Gly Ala Gly Leu Val Ile Gly Ala Val Tyr
325 330 335

Leu Tyr Ser Leu Pro Arg Ser Ala Val Lys Ala Ile Thr Ser Ala Ser
340 345 350

Ala Ser Ala Ser Ala Ser Gly Pro Cys Ile His Gln Gln Pro Pro Gly
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Tyr Trp Val Thr Ser Ile Ser Met Val Phe Leu Asn Lys Tyr Leu Leu
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Asp Ser Pro Ser Leu Gln Leu Asp Thr Pro Ile Phe Val Thr Phe Tyr
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Gln Cys Leu Val Thr Ser Leu Leu Cys Lys Gly Leu Ser Thr Leu Ala
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Thr Cys Cys Pro Gly Thr Val Asp Phe Pro Thr Leu Asn Leu Asp Leu
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Lys Val Ala Arg Ser Val Leu Pro Leu Ser Val Val Phe Ile Gly Met
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Leu Leu Leu Lys Gln Thr Thr Ser Phe Tyr Ala Leu Leu Thr Cys Gly
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Ile Ile Ile Gly Gly Phe Trp Leu Gly Ile Asp Gln Glu Gly Ala Glu
            180                 185                 190

Gly Thr Leu Ser Leu Ile Gly Thr Ile Phe Gly Val Leu Ala Ser Leu
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Cys Val Ser Leu Asn Ala Ile Tyr Thr Lys Lys Val Leu Pro Ala Val
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Asp Asn Ser Ile Trp Arg Leu Thr Phe Tyr Asn Asn Val Asn Ala Cys
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Val Leu Phe Leu Pro Leu Met Val Leu Leu Gly Glu Leu Arg Ala Leu
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Leu Asp Phe Ala His Leu Tyr Ser Ala His Phe Trp Leu Met Met Thr
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Leu Gly Gly Leu Phe Gly Phe Ala Ile Gly Tyr Val Thr Gly Leu Gln
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Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr Leu
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Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Thr Trp Gly Gln
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Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr Thr
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Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
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Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
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Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
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Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
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Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
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Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
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Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
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Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
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Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
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Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
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Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
370 375 380

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
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Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
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Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
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Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
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Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
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Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
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Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
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Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
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Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
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Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
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Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
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Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
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Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
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Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
785 790 795 800

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
805 810 815

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
820 825 830

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
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Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
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995 1000 1005

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Pro Leu Thr Ser Ser Asn His Ser Thr Ser Pro Gln Leu Ser Thr
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gatacctacc atcctatgag cgagtacccc acctaccaca cccatgggcg ctatgtgccc 780

cctagcagta ccgatcgtag cccctatgag aaggtttctg caggtaatgg tggcagcagc 840

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<213> Homo sapiens

<400> 10

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Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
20 25 30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
35 40 45

Thr Glu Lys Asn Ala Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp
50 55 60

Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met Phe Leu Gln Ile
65 70 75 80

Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro
85 90 95

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Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile
            100                 105                 110

Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala
        115                 120                 125

Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val
    130                 135                 140

Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly Trp Gly
145                 150                 155                 160

Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu Ala Ile Val
                165                 170                 175

Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly
            180                 185                 190

Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu
        195                 200                 205

Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr
    210                 215                 220

Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser
225                 230                 235                 240

Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
                245                 250                 255
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<213> Homo sapiens

<400> 11

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Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20                  25                  30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
        35                  40                  45

Thr Glu Lys Asn Ala Leu Ser Thr Gly Val Ser Phe Phe Phe Leu Ser
    50                  55                  60

Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp Pro Ser
65                  70                  75                  80
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Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met Phe Leu
85 90 95

Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe
100 105 110

Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly
115 120 125

Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr
130 135 140

Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser
145 150 155 160

Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly
165 170 175

Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu Ala
180 185 190

Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn
195 200 205

Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met
210 215 220

Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser
225 230 235 240

Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly
245 250 255

Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn
260 265 270

Leu

<210> 12
<211> 264
<212> PRT
<213> Homo sapiens

<400> 12

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Val Leu Thr Ala Thr Thr Ala Pro Lys Pro Ala Thr Val Val Thr Gly
20 25 30

Ser Gly His Ala Ser Ser Thr Pro Gly Gly Glu Lys Glu Thr Ser Ala

35 40 45

Thr Gln Arg Ser Ser Val Pro Ser Ser Thr Glu Lys Asn Ala Phe Asn
50 55 60

Ser Ser Leu Glu Asp Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg
65 70 75 80

Asp Ile Ser Glu Met Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu
85 90 95

Gly Leu Ser Asn Ile Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu
100 105 110

Thr Leu Ala Phe Arg Glu Gly Thr Ile Asn Val His Asp Val Glu Thr
115 120 125

Gln Phe Asn Gln Tyr Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr
130 135 140

Ile Ser Asp Val Ser Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln
145 150 155 160

Ser Gly Ala Gly Val Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val
165 170 175

Cys Val Leu Val Ala Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val
180 185 190

Cys Gln Cys Arg Arg Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala
195 200 205

Arg Asp Thr Tyr His Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His
210 215 220

Gly Arg Tyr Val Pro Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys
225 230 235 240

Val Ser Ala Gly Asn Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala
245 250 255

Val Ala Ala Thr Ser Ala Asn Leu
260

<210> 13
<211> 255
<212> PRT
<213> Homo sapiens

<400> 13

Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
1 5 10 15

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Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
            20                  25                  30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
        35                  40                  45

Thr Glu Lys Asn Ala Phe Asn Ser Ser Leu Glu Asp Pro Ser Thr Asp
    50                  55                  60

Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met Phe Leu Gln Ile
65                  70                  75                  80

Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile Lys Phe Arg Pro
                85                  90                  95

Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg Glu Gly Thr Ile
            100                 105                 110

Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr Lys Thr Glu Ala
        115                 120                 125

Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser Val Ser Asp Val
    130                 135                 140

Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val Pro Gly Trp Gly
145                 150                 155                 160

Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala Leu Ala Ile Val
                165                 170                 175

Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg Lys Asn Tyr Gly
            180                 185                 190

Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His Pro Met Ser Glu
        195                 200                 205

Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro Pro Ser Ser Thr
    210                 215                 220

Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn Gly Gly Ser Ser
225                 230                 235                 240

Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser Ala Asn Leu
                245                 250                 255
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<213> Cricetulus griseus

<400> 14

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<210> 15
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<213> Cricetulus griseus

<400> 15
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<210> 16
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<220>
<223> Synthetic sequence: Zinc finger peptide, left

<400> 16

Thr Ser Gly Ser Leu Val Arg
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<210> 17
<211> 7
<212> PRT
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<220>
<223> Synthetic sequence: Zinc finger peptide, right

<400> 17

Glu Arg Gly Thr Leu Ala Arg
1 5

<210> 18
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic sequence: Zinc finger peptide, left

<400> 18

Arg Ser Asp Asn Leu Ala Arg
1 5

<210> 19
<211> 7
<212> PRT
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<220>
<223> Synthetic sequence: Zinc finger peptide, right

<400> 19

Arg Ser Asp Ala Leu Ala Arg
1 5

<210> 20
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<220>
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<400> 20

Gln Ser Gly Ser Leu Thr Arg
1 5

<210> 21
<211> 7
<212> PRT
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<220>
<223> Synthetic sequence: Zinc finger peptide, right

<400> 21

Arg Ser Asp His Leu Ser Arg
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<210> 22
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic sequence: Zinc finger peptide, left

<400> 22

Arg Ser Asp Asn Leu Ala Arg
1 5

<210> 23
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> Synthetic sequence: Zinc finger peptide, right

<400> 23

Gln Ser Gly Ala Leu Ala Arg
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<210> 24
<211> 60
<212> DNA
<213> Cricetulus griseus

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<212> DNA

<213> Artificial sequence

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<223> Synthetic sequence: Clone F deletion mutation

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<211> 59
<212> DNA
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<220>
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<400> 26
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<210> 27
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<212> DNA
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<400> 27
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<210> 28
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<212> DNA
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<400> 28
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<210> 29
<211> 33
<212> DNA
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<220>
<223> Synthetic sequence: Clone M deletion mutation

<400> 29
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<210> 30
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<212> DNA
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<220>
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<400> 30
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<210> 31
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<400> 31
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<212> DNA
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<220>
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gggg 64

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<210> 35
<211> 31
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<223> Synthetic sequence: CHO-gmt3 mutant clone 1

<400> 35
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<210> 36
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<212> DNA
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<223> Synthetic sequence: CHO-gmt3 mutant clone 1

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ctcg 64

<210> 37
<211> 64
<212> DNA
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<223> Synthetic sequence: CHO-gmt3 mutant clone 3

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ctcg 64

<210> 38
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<212> DNA
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<220>
<223> Synthetic sequence: CHO-gmt3 mutant clone 3

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gggcgctcg 69

<210> 39
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<223> Synthetic sequence: CHO-gmt3 mutant clone 9

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ctcg 64

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<212> DNA
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<223> Synthetic sequence: CHO-gmt3 mutant clone 9

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<211> 3531
<212> DNA
<213> Homo sapiens

<400> 41
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<210> 42
<211> 30
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Ideal target sequence for 4-fingered ZFNs

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<222> (1)..(2)

<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<223> n is a, c, g, or t

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<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Forward PCR primer

<400> 43
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<210> 44
<211> 26
<212> DNA
<213> Artificial sequence

<220>
<223> Synthetic sequence: Reverse PCR primer

<400> 44
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