SEQUENCE LISTING

<110> SOMALOGIC, INC.

<120> NUCLEIC ACID COMPOUNDS FOR BINDING GROWTH DIFFERENTIATION FACTOR 11

<130> 01137-0011-00PCT

<150> US 62/083,592
<151> 2014-11-24

<150> US 62/113,864
<151> 2015-02-09

<160> 160

<170> PatentIn version 3.5

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<223> Biotin

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aatttttttt gtctcttgtt cttgtcttgt gnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 60

nnnnnnnnnn ncagggcatc agagcgtttc g 91

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<211> 28
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<220>
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<400> 2
atatatatcg aaacgctctg atgccctg 28

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<220>
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<400> 3
aatttttttt gtctcttgtt cttgtcttgt g 31

<210> 4
<211> 407
<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> GDF11 (Protein ID 095390)

<400> 4

Met Val Leu Ala Ala Pro Leu Leu Leu Gly Phe Leu Leu Leu Ala Leu
1 5 10 15

Glu Leu Arg Pro Arg Gly Glu Ala Ala Glu Gly Pro Ala Ala Ala Ala
20 25 30

Ala Ala Ala Ala Ala Ala Ala Ala Ala Gly Val Gly Gly Glu Arg Ser
35 40 45

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Ser Arg Pro Ala Pro Ser Val Ala Pro Glu Pro Asp Gly Cys Pro Val
    50                  55                  60

Cys Val Trp Arg Gln His Ser Arg Glu Leu Arg Leu Glu Ser Ile Lys
65                  70                  75                  80

Ser Gln Ile Leu Ser Lys Leu Arg Leu Lys Glu Ala Pro Asn Ile Ser
                85                  90                  95

Arg Glu Val Val Lys Gln Leu Leu Pro Lys Ala Pro Pro Leu Gln Gln
            100                 105                 110

Ile Leu Asp Leu His Asp Phe Gln Gly Asp Ala Leu Gln Pro Glu Asp
        115                 120                 125

Phe Leu Glu Glu Asp Glu Tyr His Ala Thr Thr Glu Thr Val Ile Ser
    130                 135                 140

Met Ala Gln Glu Thr Asp Pro Ala Val Gln Thr Asp Gly Ser Pro Leu
145                 150                 155                 160

Cys Cys His Phe His Phe Ser Pro Lys Val Met Phe Thr Lys Val Leu
                165                 170                 175

Lys Ala Gln Leu Trp Val Tyr Leu Arg Pro Val Pro Arg Pro Ala Thr
            180                 185                 190

Val Tyr Leu Gln Ile Leu Arg Leu Lys Pro Leu Thr Gly Glu Gly Thr
        195                 200                 205

Ala Gly Gly Gly Gly Gly Gly Arg Arg His Ile Arg Ile Arg Ser Leu
    210                 215                 220

Lys Ile Glu Leu His Ser Arg Ser Gly His Trp Gln Ser Ile Asp Phe
225                 230                 235                 240
```

```
Lys Gln Val Leu His Ser Trp Phe Arg Gln Pro Gln Ser Asn Trp Gly
                245                 250                 255

Ile Glu Ile Asn Ala Phe Asp Pro Ser Gly Thr Asp Leu Ala Val Thr
            260                 265                 270

Ser Leu Gly Pro Gly Ala Glu Gly Leu His Pro Phe Met Glu Leu Arg
        275                 280                 285

Val Leu Glu Asn Thr Lys Arg Ser Arg Arg Asn Leu Gly Leu Asp Cys
    290                 295                 300

Asp Glu His Ser Ser Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
305                 310                 315                 320

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
                325                 330                 335

Lys Ala Asn Tyr Cys Ser Gly Gln Cys Glu Tyr Met Phe Met Gln Lys
            340                 345                 350

Tyr Pro His Thr His Leu Val Gln Gln Ala Asn Pro Arg Gly Ser Ala
        355                 360                 365

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
    370                 375                 380

Phe Asn Asp Lys Gln Gln Ile Ile Tyr Gly Lys Ile Pro Gly Met Val
385                 390                 395                 400

Val Asp Arg Cys Gly Cys Ser
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<210> 5
<211> 375

<212> PRT
<213> Homo sapiens

<220>
<221> misc_feature
<223> myostatin (Protein ID 014793)

<400> 5

Met Gln Lys Leu Gln Leu Cys Val Tyr Ile Tyr Leu Phe Met Leu Ile
1 5 10 15

Val Ala Gly Pro Val Asp Leu Asn Glu Asn Ser Glu Gln Lys Glu Asn
20 25 30

Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Thr Trp Arg Gln Asn Thr
35 40 45

Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
50 55 60

Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Val Ile Arg Gln Leu
65 70 75 80

Leu Pro Lys Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val
85 90 95

Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His
100 105 110

Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu
115 120 125

Met Gln Val Asp Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
130 135 140

Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
145 150 155 160

```
Arg Pro Val Glu Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
                165                 170                 175

Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
            180                 185                 190

Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
        195                 200                 205

Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
    210                 215                 220

Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
225                 230                 235                 240

Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Lys
                245                 250                 255

Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
            260                 265                 270

Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
        275                 280                 285

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
    290                 295                 300

Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
305                 310                 315                 320

Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
                325                 330                 335

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
            340                 345                 350
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Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
        355                 360                 365


Val Asp Arg Cys Gly Cys Ser
    370                 375


<210>  6
<211>  407
<212>  PRT
<213>  Homo sapiens


<220>
<221>  misc_feature
<223>  Human GDF11 Protein ID is O95390; exemplary human mature GDF11

<400>  6

Met Val Leu Ala Ala Pro Leu Leu Leu Gly Phe Leu Leu Leu Ala Leu
1               5                   10                  15


Glu Leu Arg Pro Arg Gly Glu Ala Ala Glu Gly Pro Ala Ala Ala Ala
            20                  25                  30


Ala Ala Ala Ala Ala Ala Ala Ala Ala Gly Val Gly Gly Glu Arg Ser
        35                  40                  45


Ser Arg Pro Ala Pro Ser Val Ala Pro Glu Pro Asp Gly Cys Pro Val
    50                  55                  60


Cys Val Trp Arg Gln His Ser Arg Glu Leu Arg Leu Glu Ser Ile Lys
65                  70                  75                  80


Ser Gln Ile Leu Ser Lys Leu Arg Leu Lys Glu Ala Pro Asn Ile Ser
                85                  90                  95


Arg Glu Val Val Lys Gln Leu Leu Pro Lys Ala Pro Pro Leu Gln Gln
            100                 105                 110
```

```
Ile Leu Asp Leu His Asp Phe Gln Gly Asp Ala Leu Gln Pro Glu Asp
        115                 120                 125

Phe Leu Glu Glu Asp Glu Tyr His Ala Thr Thr Glu Thr Val Ile Ser
    130                 135                 140

Met Ala Gln Glu Thr Asp Pro Ala Val Gln Thr Asp Gly Ser Pro Leu
145                 150                 155                 160

Cys Cys His Phe His Phe Ser Pro Lys Val Met Phe Thr Lys Val Leu
                165                 170                 175

Lys Ala Gln Leu Trp Val Tyr Leu Arg Pro Val Pro Arg Pro Ala Thr
            180                 185                 190

Val Tyr Leu Gln Ile Leu Arg Leu Lys Pro Leu Thr Gly Glu Gly Thr
        195                 200                 205

Ala Gly Gly Gly Gly Gly Gly Arg Arg His Ile Arg Ile Arg Ser Leu
    210                 215                 220

Lys Ile Glu Leu His Ser Arg Ser Gly His Trp Gln Ser Ile Asp Phe
225                 230                 235                 240

Lys Gln Val Leu His Ser Trp Phe Arg Gln Pro Gln Ser Asn Trp Gly
                245                 250                 255

Ile Glu Ile Asn Ala Phe Asp Pro Ser Gly Thr Asp Leu Ala Val Thr
            260                 265                 270

Ser Leu Gly Pro Gly Ala Glu Gly Leu His Pro Phe Met Glu Leu Arg
        275                 280                 285

Val Leu Glu Asn Thr Lys Arg Ser Arg Arg Asn Leu Gly Leu Asp Cys
    290                 295                 300
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```
Asp Glu His Ser Ser Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
305                 310                 315                 320


Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
                325                 330                 335


Lys Ala Asn Tyr Cys Ser Gly Gln Cys Glu Tyr Met Phe Met Gln Lys
            340                 345                 350


Tyr Pro His Thr His Leu Val Gln Gln Ala Asn Pro Arg Gly Ser Ala
        355                 360                 365


Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
    370                 375                 380


Phe Asn Asp Lys Gln Gln Ile Ile Tyr Gly Lys Ile Pro Gly Met Val
385                 390                 395                 400


Val Asp Arg Cys Gly Cys Ser
                405


<210>  7
<211>  405
<212>  PRT
<213>  Mouse sp.


<220>
<221>  misc_feature
<223>  Mouse GDF11 Protein ID is Q9Z1W4; exemplary mouse mature GDF8

<400>  7

Met Val Leu Ala Ala Pro Leu Leu Leu Gly Phe Leu Leu Leu Ala Leu
1               5                   10                  15


Glu Leu Arg Pro Arg Gly Glu Ala Ala Glu Gly Pro Ala Ala Ala Ala
            20                  25                  30
```

```
Ala Ala Ala Ala Ala Ala Ala Gly Val Gly Gly Glu Arg Ser Ser Arg
        35                  40                  45

Pro Ala Pro Ser Ala Pro Pro Glu Pro Asp Gly Cys Pro Val Cys Val
    50                  55                  60

Trp Arg Gln His Ser Arg Glu Leu Arg Leu Glu Ser Ile Lys Ser Gln
65                  70                  75                  80

Ile Leu Ser Lys Leu Arg Leu Lys Glu Ala Pro Asn Ile Ser Arg Glu
                85                  90                  95

Val Val Lys Gln Leu Leu Pro Lys Ala Pro Pro Leu Gln Gln Ile Leu
            100                 105                 110

Asp Leu His Asp Phe Gln Gly Asp Ala Leu Gln Pro Glu Asp Phe Leu
        115                 120                 125

Glu Glu Asp Glu Tyr His Ala Thr Thr Glu Thr Val Ile Ser Met Ala
    130                 135                 140

Gln Glu Thr Asp Pro Ala Val Gln Thr Asp Gly Ser Pro Leu Cys Cys
145                 150                 155                 160

His Phe His Phe Ser Pro Lys Val Met Phe Thr Lys Val Leu Lys Ala
                165                 170                 175

Gln Leu Trp Val Tyr Leu Arg Pro Val Pro Arg Pro Ala Thr Val Tyr
            180                 185                 190

Leu Gln Ile Leu Arg Leu Lys Pro Leu Thr Gly Glu Gly Thr Ala Gly
        195                 200                 205

Gly Gly Gly Gly Gly Arg Arg His Ile Arg Ile Arg Ser Leu Lys Ile
    210                 215                 220
```

```
Glu Leu His Ser Arg Ser Gly His Trp Gln Ser Ile Asp Phe Lys Gln
225                 230                 235                 240

Val Leu His Ser Trp Phe Arg Gln Pro Gln Ser Asn Trp Gly Ile Glu
                245                 250                 255

Ile Asn Ala Phe Asp Pro Ser Gly Thr Asp Leu Ala Val Thr Ser Leu
            260                 265                 270

Gly Pro Gly Ala Glu Gly Leu His Pro Phe Met Glu Leu Arg Val Leu
        275                 280                 285

Glu Asn Thr Lys Arg Ser Arg Arg Asn Leu Gly Leu Asp Cys Asp Glu
    290                 295                 300

His Ser Ser Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val Asp Phe
305                 310                 315                 320

Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr Lys Ala
                325                 330                 335

Asn Tyr Cys Ser Gly Gln Cys Glu Tyr Met Phe Met Gln Lys Tyr Pro
            340                 345                 350

His Thr His Leu Val Gln Gln Ala Asn Pro Arg Gly Ser Ala Gly Pro
        355                 360                 365

Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr Phe Asn
    370                 375                 380

Asp Lys Gln Gln Ile Ile Tyr Gly Lys Ile Pro Gly Met Val Val Asp
385                 390                 395                 400

Arg Cys Gly Cys Ser
                405
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<210> 8
<211> 345
<212> PRT
<213> Rat sp.

<220>
<221> misc_feature
<223> Rat GDF11 Protein ID is Q9Z217; exemplary rat mature GDF8

<400> 8

Pro Glu Pro Asp Gly Cys Pro Val Cys Val Trp Arg Gln His Ser Arg
1 5 10 15

Arg Val Arg Leu Gly Ser Ile Lys Ser Gln Ile Leu Ser Lys Leu Arg
20 25 30

Leu Lys Glu Ala Pro Asn Ile Ser Arg Glu Val Val Lys Gln Leu Leu
35 40 45

Pro Lys Ala Pro Pro Leu Gln Gln Ile Leu Asp Leu His Asp Phe Gln
50 55 60

Gly Asp Ala Leu Gln Pro Glu Asp Phe Leu Glu Glu Asp Glu Tyr His
65 70 75 80

Ala Thr Thr Glu Thr Val Ile Ser Met Ala Gln Glu Thr Asp Pro Ala
85 90 95

Val Gln Thr Asp Gly Ser Pro Leu Cys Cys His Phe His Phe Ser Pro
100 105 110

Lys Val Met Phe Thr Lys Val Leu Lys Ala Gln Leu Trp Val Tyr Leu
115 120 125

Arg Pro Val Pro Arg Pro Ala Thr Val Tyr Leu Gln Ile Leu Arg Leu
130 135 140

```
Lys Pro Leu Thr Gly Glu Gly Thr Ala Gly Gly Gly Gly Gly Arg
145                 150                 155                 160

Arg His Ile Arg Ile Arg Ser Leu Lys Ile Glu Leu His Ser Arg Ser
                165                 170                 175

Gly His Trp Gln Ser Ile Asp Phe Lys Gln Val Leu His Ser Trp Phe
            180                 185                 190

Arg Gln Pro Gln Ser Asn Trp Gly Ile Glu Ile Asn Ala Phe Asp Pro
        195                 200                 205

Ser Gly Thr Asp Leu Ala Val Thr Ser Leu Gly Pro Gly Ala Glu Gly
    210                 215                 220

Cys His Pro Phe Met Glu Leu Arg Val Leu Glu Asn Thr Lys Arg Ser
225                 230                 235                 240

Arg Arg Asn Leu Gly Leu Asp Cys Asp Glu His Ser Ser Glu Ser Arg
                245                 250                 255

Cys Cys Arg Tyr Pro Leu Thr Val Asp Phe Glu Ala Ser Gly Trp Asp
            260                 265                 270

Trp Ile Ile Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Gln
        275                 280                 285

Cys Glu Tyr Met Phe Met Gln Lys Tyr Pro His Thr His Leu Val Gln
    290                 295                 300

Gln Ala Asn Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys
305                 310                 315                 320

Met Ser Pro Ile Asn Met Leu Tyr Phe Asn Asp Lys Gln Gln Ile Ile
                325                 330                 335
```

```
Tyr Gly Lys Ile Pro Gly Met Val Val
            340                 345


<210>  9
<211>  375
<212>  PRT
<213>  Homo sapiens


<220>
<221>  misc_feature
<223>  Human myostatin (GDF8) Protein ID is O14793; exemplary human
       mature GDF8

<400>  9

Met Gln Lys Leu Gln Leu Cys Val Tyr Ile Tyr Leu Phe Met Leu Ile
1               5                   10                  15


Val Ala Gly Pro Val Asp Leu Asn Glu Asn Ser Glu Gln Lys Glu Asn
            20                  25                  30


Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Thr Trp Arg Gln Asn Thr
        35                  40                  45


Lys Ser Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys Leu
    50                  55                  60


Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Val Ile Arg Gln Leu
65                  70                  75                  80


Leu Pro Lys Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp Val
                85                  90                  95


Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr His
            100                 105                 110


Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe Leu
```

```
        115                 120                 125

Met Gln Val Asp Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser Ser
    130                 135                 140

Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr Leu
145                 150                 155                 160

Arg Pro Val Glu Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg Leu
                165                 170                 175

Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser Leu
            180                 185                 190

Lys Leu Asp Met Asn Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp Val
        195                 200                 205

Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu Gly
    210                 215                 220

Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val Thr
225                 230                 235                 240

Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val Lys
                245                 250                 255

Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp Cys
            260                 265                 270

Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr Val
        275                 280                 285

Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg Tyr
    290                 295                 300

Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln Lys
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305 310 315 320

Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser Ala
325 330 335

Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu Tyr
340 345 350

Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met Val
355 360 365

Val Asp Arg Cys Gly Cys Ser
370 375

<210> 10
<211> 376
<212> PRT
<213> Mouse sp.

<220>
<221> misc_feature
<223> Mouse GDF8 Protein ID is O08689; exemplary mouse mature GDF8

<400> 10

Met Met Gln Lys Leu Gln Met Tyr Val Tyr Ile Tyr Leu Phe Met Leu
1 5 10 15

Ile Ala Ala Gly Pro Val Asp Leu Asn Glu Gly Ser Glu Arg Glu Glu
20 25 30

Asn Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Ala Trp Arg Gln Asn
35 40 45

Thr Arg Tyr Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys
50 55 60

Leu Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Ala Ile Arg Gln

65 70 75 80

Leu Leu Pro Arg Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp
85 90 95

Val Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr
100 105 110

His Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe
115 120 125

Leu Met Gln Ala Asp Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser
130 135 140

Ser Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr
145 150 155 160

Leu Arg Pro Val Lys Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg
165 170 175

Leu Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser
180 185 190

Leu Lys Leu Asp Met Ser Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp
195 200 205

Val Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu
210 215 220

Gly Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val
225 230 235 240

Thr Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val
245 250 255

Lys Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp

260 265 270

Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr
275 280 285

Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg
290 295 300

Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln
305 310 315 320

Lys Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser
325 330 335

Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu
340 345 350

Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met
355 360 365

Val Val Asp Arg Cys Gly Cys Ser
370 375

<210> 11
<211> 376
<212> PRT
<213> Rat sp.

<220>
<221> misc_feature
<223> Rat GDF11 Protein ID is O35312; exemplary rat mature GDF8

<400> 11

Met Ile Gln Lys Pro Gln Met Tyr Val Tyr Ile Tyr Leu Phe Val Leu
1 5 10 15

Ile Ala Ala Gly Pro Val Asp Leu Asn Glu Asp Ser Glu Arg Glu Ala

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            20                  25                  30

Asn Val Glu Lys Glu Gly Leu Cys Asn Ala Cys Ala Trp Arg Gln Asn
        35                  40                  45

Thr Arg Tyr Ser Arg Ile Glu Ala Ile Lys Ile Gln Ile Leu Ser Lys
    50                  55                  60

Leu Arg Leu Glu Thr Ala Pro Asn Ile Ser Lys Asp Ala Ile Arg Gln
65                  70                  75                  80

Leu Leu Pro Arg Ala Pro Pro Leu Arg Glu Leu Ile Asp Gln Tyr Asp
                85                  90                  95

Val Gln Arg Asp Asp Ser Ser Asp Gly Ser Leu Glu Asp Asp Asp Tyr
            100                 105                 110

His Ala Thr Thr Glu Thr Ile Ile Thr Met Pro Thr Glu Ser Asp Phe
        115                 120                 125

Leu Met Gln Ala Asp Gly Lys Pro Lys Cys Cys Phe Phe Lys Phe Ser
    130                 135                 140

Ser Lys Ile Gln Tyr Asn Lys Val Val Lys Ala Gln Leu Trp Ile Tyr
145                 150                 155                 160

Leu Arg Ala Val Lys Thr Pro Thr Thr Val Phe Val Gln Ile Leu Arg
                165                 170                 175

Leu Ile Lys Pro Met Lys Asp Gly Thr Arg Tyr Thr Gly Ile Arg Ser
            180                 185                 190

Leu Lys Leu Asp Met Ser Pro Gly Thr Gly Ile Trp Gln Ser Ile Asp
        195                 200                 205

Val Lys Thr Val Leu Gln Asn Trp Leu Lys Gln Pro Glu Ser Asn Leu
```

```
    210                 215                 220

Gly Ile Glu Ile Lys Ala Leu Asp Glu Asn Gly His Asp Leu Ala Val
225                 230                 235                 240

Thr Phe Pro Gly Pro Gly Glu Asp Gly Leu Asn Pro Phe Leu Glu Val
                245                 250                 255

Lys Val Thr Asp Thr Pro Lys Arg Ser Arg Arg Asp Phe Gly Leu Asp
            260                 265                 270

Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg Tyr Pro Leu Thr
        275                 280                 285

Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile Ala Pro Lys Arg
    290                 295                 300

Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe Val Phe Leu Gln
305                 310                 315                 320

Lys Tyr Pro His Thr His Leu Val His Gln Ala Asn Pro Arg Gly Ser
                325                 330                 335

Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro Ile Asn Met Leu
            340                 345                 350

Tyr Phe Asn Gly Lys Glu Gln Ile Ile Tyr Gly Lys Ile Pro Ala Met
        355                 360                 365

Val Val Asp Arg Cys Gly Cys Ser
    370                 375
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<210> 12
<211> 50
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<220>
<223> Synthetic

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<222> (10)..(11)
<223> n is NapdU

<220>
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<222> (17)..(18)
<223> n is NapdU

<220>
<221> misc_feature
<222> (21)..(23)
<223> n is NapdU

<220>
<221> misc_feature
<222> (27)..(29)
<223> n is NapdU

<220>
<221> misc_feature
<222> (36)..(37)
<223> n is NapdU

<220>
<221> misc_feature
<222> (40)..(40)
<223> n is NapdU

<220>
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<222> (45)..(45)
<223> n is NapdU

<400> 12
ccctgcgccn ncggacnngc nnnaagnnna gccgcnngcn cacancacaa 50

<210> 13
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<220>
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<222> (6)..(6)
<223> n is NapdU

<220>
<221> misc_feature
<222> (12)..(13)
<223> n is NapdU

<220>
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<222> (16)..(18)
<223> n is NapdU

<220>
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<222> (22)..(24)
<223> n is NapdU

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<222> (28)..(28)
<223> n is NapdU

<220>
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<222> (31)..(31)
<223> n is NapdU

<220>
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<222> (36)..(36)
<223> n is NapdU

<400> 13
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<210> 14
<211> 50
<212> DNA
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<220>
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<220>
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<222> (10)..(11)
<223> n is NapdU

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<222> (17)..(18)
<223> n is NapdU

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<222> (21)..(22)
<223> n is NapdU

<220>
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<223> n is NapdU

<220>
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<223> n is NapdU

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<222> (40)..(40)
<223> n is NapdU

<220>
<221> misc_feature
<222> (45)..(45)
<223> n is NapdU

<400> 14
ccctgcgccn ncggacnngc nncaagnnna gccgcnngcn cacancacaa 50

<210> 15
<211> 50
<212> DNA
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<223> Synthetic

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<222> (10)..(11)
<223> n is NapdU

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<222> (17)..(18)
<223> n is NapdU

<220>
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<222> (21)..(23)
<223> n is NapdU

<220>
<221> misc_feature
<222> (27)..(29)
<223> n is NapdU

<220>
<221> misc_feature
<222> (36)..(37)
<223> n is NapdU

<220>
<221> misc_feature
<222> (40)..(40)
<223> n is NapdU

<400> 15
ccctgcgccn ncggacnngc nnnaagnnna gccgcnngcn cacaacacaa 50

<210> 16
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

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Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile
20 25 30

Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Gln Cys Glu Tyr
35 40 45

Met Phe Met Gln Lys Tyr Pro His Thr His Leu Val Gln Gln Ala Asn
50 55 60

Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro
65 70 75 80

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

Ile Pro Gly Met Val Val Asp Arg Cys Gly Cys Ser
100 105

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Phe Gly Leu Asp Cys Asp Glu His Ser Thr Glu Ser Arg Cys Cys Arg
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Tyr Pro Leu Thr Val Asp Phe Glu Ala Phe Gly Trp Asp Trp Ile Ile
20 25 30

Ala Pro Lys Arg Tyr Lys Ala Asn Tyr Cys Ser Gly Glu Cys Glu Phe
35 40 45

Val Phe Leu Gln Lys Tyr Pro His Thr His Leu Val His Gln Ala Asn
50 55 60

Pro Arg Gly Ser Ala Gly Pro Cys Cys Thr Pro Thr Lys Met Ser Pro
65 70 75 80

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

Ile Pro Ala Met Val Val Asp Arg Cys Gly Cys Ser
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<221> misc_feature
<222> (20)..(21)
<223> n is NapdU

<220>
<221> misc_feature
<222> (24)..(26)
<223> n is NapdU

<220>
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<222> (30)..(32)
<223> n is NapdU

<220>
<221> misc_feature
<222> (37)..(37)
<223> n is NapdU

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ctgtgnccac ncagccgacn ngannnacgn nnagcgngcg gaggccacaa 50

<210> 160
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic

<220>

<221> misc_feature
<222> (2)..(3)
<223> n is a C-5 modified pyrimidine

<220>
<221> misc_feature
<222> (6)..(8)
<223> n is a C-5 modified pyrimidine

<220>
<221> misc_feature
<222> (9)..(13)
<223> n, if present, is a, c, g, t, or u; up to 3 nucleotides may be absent

<220>
<221> misc_feature
<222> (14)..(16)
<223> n is a C-5 modified pyrimidine

<400> 160
cnngmnnnnn nnnnnnagg 19