SEQUENCE LISTING

<110> Dana-Farber Cancer Institute, Inc.

<120> VACCINATION WITH MICA/B ALPHA 3 DOMAIN FOR THE TREATMENT OF CANCER

<130> DFCI-126/001WO

<150> US 62/263,377
<151> 2015-12-04

<150> US 62/422,454
<151> 2016-11-15

<160> 30

<170> PatentIn version 3.5

<210> 1
<211> 360
<212> PRT
<213> Homo sapiens

<400> 1

His Ser Leu Arg Tyr Asn Leu Thr Val Leu Ser Trp Asp Gly Ser Val
1 5 10 15

Gln Ser Gly Phe Leu Ala Glu Val His Leu Asp Gly Gln Pro Phe Leu
20 25 30

Arg Tyr Asp Arg Gln Lys Cys Arg Ala Lys Pro Gln Gly Gln Trp Ala
35 40 45

Glu Asp Val Leu Gly Asn Lys Thr Trp Asp Arg Glu Thr Arg Asp Leu
50 55 60

Thr Gly Asn Gly Lys Asp Leu Arg Met Thr Leu Ala His Ile Lys Asp
65 70 75 80

Gln Lys Glu Gly Leu His Ser Leu Gln Glu Ile Arg Val Cys Glu Ile
85 90 95

His Glu Asp Asn Ser Thr Arg Ser Ser Gln His Phe Tyr Tyr Asp Gly
100 105 110

Glu Leu Phe Leu Ser Gln Asn Val Glu Thr Glu Glu Trp Thr Val Pro
115 120 125

Gln Ser Ser Arg Ala Gln Thr Leu Ala Met Asn Val Arg Asn Phe Leu
130 135 140

Lys Glu Asp Ala Met Lys Thr Lys Thr His Tyr His Ala Met His Ala
145 150 155 160

Asp Cys Leu Gln Glu Leu Arg Arg Tyr Leu Glu Ser Ser Val Val Leu
165 170 175

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Arg Arg Thr Val Pro Pro Met Val Asn Val Thr Arg Ser Glu Ala Ser
            180                 185                 190

Glu Gly Asn Ile Thr Val Thr Cys Arg Ala Ser Ser Phe Tyr Pro Arg
        195                 200                 205

Asn Ile Thr Leu Thr Trp Arg Gln Asp Gly Val Ser Leu Ser His Asp
    210                 215                 220

Thr Gln Gln Trp Gly Asp Val Leu Pro Asp Gly Asn Gly Thr Tyr Gln
225                 230                 235                 240

Thr Trp Val Ala Thr Arg Ile Cys Gln Gly Glu Glu Gln Arg Phe Thr
                245                 250                 255

Cys Tyr Met Glu His Ser Gly Asn His Ser Thr His Pro Val Pro Ser
            260                 265                 270

Gly Lys Val Leu Val Leu Gln Ser His Trp Gln Thr Phe His Val Ser
        275                 280                 285

Ala Val Ala Ala Ala Ala Ala Ala Ile Phe Val Ile Ile Ile Phe Tyr
    290                 295                 300

Val Arg Cys Cys Lys Lys Lys Thr Ser Ala Ala Glu Gly Pro Glu Leu
305                 310                 315                 320

Val Ser Leu Gln Val Leu Asp Gln His Pro Val Gly Thr Ser Asp His
                325                 330                 335

Arg Asp Ala Thr Gln Leu Gly Phe Gln Pro Leu Met Ser Ala Leu Gly
            340                 345                 350

Ser Thr Gly Ser Thr Glu Gly Ala
        355                 360
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<210> 2
<211> 358
<212> PRT
<213> Homo sapiens

<400> 2

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Pro His Ser Leu Arg Tyr Asn Leu Met Val Leu Ser Gln Asp Gly Ser
1               5                   10                  15

Val Gln Ser Gly Phe Leu Ala Glu Gly His Leu Asp Gly Gln Pro Phe
            20                  25                  30

Leu Arg Tyr Asp Arg Gln Lys Arg Arg Ala Lys Pro Gln Gly Gln Trp
        35                  40                  45

Ala Glu Asp Val Leu Gly Ala Lys Thr Trp Asp Thr Glu Thr Glu Asp
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```
    50                  55                  60

Leu Thr Glu Asn Gly Gln Asp Leu Arg Arg Thr Leu Thr His Ile Lys
65                  70                  75                  80

Asp Gln Lys Gly Gly Leu His Ser Leu Gln Glu Ile Arg Val Cys Glu
                85                  90                  95

Ile His Glu Asp Ser Ser Thr Arg Gly Ser Arg His Phe Tyr Tyr Asp
            100                 105                 110

Gly Glu Leu Phe Leu Ser Gln Asn Leu Glu Thr Gln Glu Ser Thr Val
        115                 120                 125

Pro Gln Ser Ser Arg Ala Gln Thr Leu Ala Met Asn Val Thr Asn Phe
    130                 135                 140

Trp Lys Glu Asp Ala Met Lys Thr Lys Thr His Tyr Arg Ala Met Gln
145                 150                 155                 160

Ala Asp Cys Leu Gln Lys Leu Gln Arg Tyr Leu Lys Ser Gly Val Ala
                165                 170                 175

Ile Arg Arg Thr Val Pro Pro Met Val Asn Val Thr Cys Ser Glu Val
            180                 185                 190

Ser Glu Gly Asn Ile Thr Val Thr Cys Arg Ala Ser Ser Phe Tyr Pro
        195                 200                 205

Arg Asn Ile Thr Leu Thr Trp Arg Gln Asp Gly Val Ser Leu Ser His
    210                 215                 220

Asn Thr Gln Gln Trp Gly Asp Val Leu Pro Asp Gly Gly Thr Tyr Gln
225                 230                 235                 240

Thr Trp Val Ala Thr Arg Ile Arg Gln Gly Glu Glu Gln Arg Phe Thr
                245                 250                 255

Cys Tyr Met Glu His Ser Gly Asn His Gly Thr His Pro Val Pro Ser
            260                 265                 270

Gly Lys Ala Leu Val Leu Gln Ser Gln Arg Thr Asp Phe Pro Tyr Val
        275                 280                 285

Ser Ala Ala Met Pro Cys Phe Val Ile Ile Ile Ile Leu Cys Val Pro
    290                 295                 300

Cys Cys Lys Lys Lys Thr Ser Ala Ala Glu Gly Pro Glu Leu Val Ser
305                 310                 315                 320

Leu Gln Val Leu Asp Gln His Pro Val Gly Thr Gly Asp His Arg Asp
                325                 330                 335
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Ala Ala Gln Leu Gly Phe Gln Pro Leu Met Ser Ala Thr Gly Ser Thr
            340                 345                 350


Gly Ser Thr Glu Gly Ala
        355


<210>  3
<211>  109
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Artificial polypeptide

<400>  3

Arg Thr Val Pro Pro Met Val Asn Val Thr Arg Ser Glu Ala Ser Glu
1               5                   10                  15


Gly Asn Ile Thr Val Thr Cys Arg Ala Ser Gly Phe Tyr Pro Trp Asn
            20                  25                  30


Ile Thr Leu Ser Trp Arg Gln Asp Gly Val Ser Leu Ser His Asp Thr
        35                  40                  45


Gln Gln Trp Gly Asp Val Leu Pro Asp Gly Asn Gly Thr Tyr Gln Thr
    50                  55                  60


Trp Val Ala Thr Arg Ile Ser Gln Gly Glu Glu Gln Arg Phe Thr Cys
65                  70                  75                  80


Tyr Met Glu His Ser Gly Asn His Ser Thr His Pro Val Pro Ser Gly
                85                  90                  95


Lys Val Leu Val Leu Gln Ser His Trp Gln Thr Phe His
            100                 105


<210>  4
<211>  109
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Artificial polypeptide

<400>  4

Arg Thr Val Pro Pro Met Val Gln Val Thr Arg Ser Glu Ala Ser Glu
1               5                   10                  15


Gly Gln Ile Thr Val Thr Cys Arg Ala Ser Gly Phe Tyr Pro Trp Asn
            20                  25                  30


Ile Asn Leu Ser Trp Arg Gln Asp Gly Val Ser Leu Ser His Asp Thr
        35                  40                  45
```

```
Gln Gln Trp Gly Asp Val Leu Pro Asp Gly Asn Gly Thr Tyr Gln Thr
    50                  55                  60

Trp Val Ala Thr Arg Ile Ser Gln Gly Glu Glu Gln Arg Phe Thr Cys
65                  70                  75                  80

Tyr Met Glu His Ser Gly Gln His Ser Thr His Pro Val Pro Ser Gly
                85                  90                  95

Lys Val Leu Val Leu Gln Ser His Trp Gln Thr Phe His
            100                 105
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<210> 5
<211> 314
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial polypeptide

<400> 5

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Met Val Pro Cys Thr Leu Leu Leu Leu Leu Ala Ala Ala Leu Ala Pro
1               5                   10                  15

Thr Gln Thr Arg Ala His His His His His His Ser Lys Ser Tyr Pro
            20                  25                  30

Tyr Asp Val Pro Asp Tyr Ala Arg Thr Val Pro Pro Met Val Asn Val
        35                  40                  45

Thr Arg Ser Glu Ala Ser Glu Gly Asn Ile Thr Val Thr Cys Arg Ala
    50                  55                  60

Ser Gly Phe Tyr Pro Trp Asn Ile Thr Leu Ser Trp Arg Gln Asp Gly
65                  70                  75                  80

Val Ser Leu Ser His Asp Thr Gln Gln Trp Gly Asp Val Leu Pro Asp
                85                  90                  95

Gly Asn Gly Thr Tyr Gln Thr Trp Val Ala Thr Arg Ile Ser Gln Gly
            100                 105                 110

Glu Glu Gln Arg Phe Thr Cys Tyr Met Glu His Ser Gly Asn His Ser
        115                 120                 125

Thr His Pro Val Pro Ser Gly Lys Val Leu Val Leu Gln Ser His Trp
    130                 135                 140

Gln Thr Phe His Gly Ser Gly Asp Ile Ile Lys Leu Leu Asn Glu Gln
145                 150                 155                 160

Val Asn Lys Glu Met Gln Ser Ser Asn Leu Tyr Met Ser Met Ser Ser
                165                 170                 175
```

```
Trp Cys Tyr Thr His Ser Leu Asp Gly Ala Gly Leu Phe Leu Phe Asp
            180                 185                 190

His Ala Ala Glu Glu Tyr Glu His Ala Lys Lys Leu Ile Ile Phe Leu
        195                 200                 205

Asn Glu Asn Asn Val Pro Val Gln Leu Thr Ser Ile Ser Ala Pro Glu
    210                 215                 220

His Lys Phe Glu Gly Leu Thr Gln Ile Phe Gln Lys Ala Tyr Glu His
225                 230                 235                 240

Glu Gln His Ile Ser Glu Ser Ile Asn Asn Ile Val Asp His Ala Ile
                245                 250                 255

Lys Ser Lys Asp His Ala Thr Phe Asn Phe Leu Gln Trp Tyr Val Ala
            260                 265                 270

Glu Gln His Glu Glu Glu Val Leu Phe Lys Asp Ile Leu Asp Lys Ile
        275                 280                 285

Glu Leu Ile Gly Asn Glu Asn His Gly Leu Tyr Leu Ala Asp Gln Tyr
    290                 295                 300

Val Lys Gly Ile Ala Lys Ser Arg Lys Ser
305                 310
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<210>  6
<211>  945
<212>  DNA
<213>  Artificial Sequence

<220>
<223>  Artificial polynucleotide

<400>  6

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gcccaccatc atcaccatca ctcaaaaagt tacccctacg atgtccccga ctacgccagg      120

accgtgcccc ctatggtgaa cgtcacacgc tcagaagcta gcgagggcaa tatcaccgtg      180

acatgccgag catctgggtt ctatccttgg aacattacac tgagttggag gcaggacggg      240

gtgtccctgt ctcacgatac tcagcagtgg ggcgacgtgc tgccagatgg caatgggacc      300

taccagacat gggtggctac tcggatctcc caggggggagg aacagagatt cacctgctat      360

atggagcata gtggaaacca ctcaacacat cctgtgccat ctggcaaggt gctggtcctg      420

cagagtcact ggcagacatt tcatggatca ggcgatatca ttaagctgct gaacgaacag      480

gtgaacaagg agatgcagtc tagtaacctg tacatgagca tgtcaagctg gtgttataca      540

cactccctgg acggagccgg cctgttcctg tttgatcacg ccgctgagga atacgaacat      600

gctaagaaac tgatcatttt cctgaatgag aacaatgtgc cagtccagct gactagcatt      660
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tccgcacccg aacacaagtt cgagggcctg acccagatct ttcagaaagc ctacgaacac 720

gagcagcata tctctgaaag tatcaacaac atcgtggacc acgcaatcaa gagcaaagat 780

catgccacct tcaactttct gcagtggtac gtggccgagc agcacgagga agaggtcctg 840

tttaaggaca ttctggataa aatcgaactg attggcaatg agaatcacgg gctgtacctg 900

gcagatcagt atgtcaaggg catcgcaaag tcaaggaaat catga 945

<210> 7
<211> 314
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial polypeptide

<400> 7

Met Val Pro Cys Thr Leu Leu Leu Leu Leu Ala Ala Ala Leu Ala Pro
1 5 10 15

Thr Gln Thr Arg Ala His His His His His His Ser Lys Ser Tyr Pro
20 25 30

Tyr Asp Val Pro Asp Tyr Ala Arg Thr Val Pro Pro Met Val Asn Val
35 40 45

Thr Arg Ser Glu Ala Ser Glu Gly Asn Ile Thr Val Thr Cys Arg Ala
50 55 60

Ser Gly Phe Tyr Pro Trp Asn Ile Thr Leu Ser Trp Arg Gln Asp Gly
65 70 75 80

Val Ser Leu Ser His Asp Thr Gln Gln Trp Gly Asp Val Leu Pro Asp
85 90 95

Gly Asn Gly Thr Tyr Gln Thr Trp Val Ala Thr Arg Ile Ser Gln Gly
100 105 110

Glu Glu Gln Arg Phe Thr Cys Tyr Met Glu His Ser Gly Asn His Ser
115 120 125

Thr His Pro Val Pro Ser Gly Lys Val Leu Val Leu Gln Ser His Trp
130 135 140

Gln Thr Phe His Gly Ser Gly Asp Ile Ile Lys Leu Leu Asn Glu Gln
145 150 155 160

Val Asn Lys Glu Met Gln Ser Ser Asn Leu Tyr Met Ser Met Ser Ser
165 170 175

Trp Cys Tyr Thr His Ser Leu Asp Gly Ala Gly Leu Phe Leu Phe Asp
180 185 190

```
His Ala Ala Glu Glu Tyr Glu His Ala Lys Lys Leu Ile Ile Phe Leu
        195                 200                 205

Asn Glu Asn Asn Val Pro Val Gln Leu Thr Ser Ile Ser Ala Pro Glu
    210                 215                 220

His Lys Phe Glu Gly Leu Thr Gln Ile Phe Gln Lys Ala Tyr Glu His
225                 230                 235                 240

Glu Gln His Ile Ser Glu Ser Ile Asn Asn Ile Val Asp His Ala Ile
                245                 250                 255

Lys Ser Lys Asp His Ala Thr Phe Asn Phe Leu Gln Trp Tyr Val Ala
            260                 265                 270

Glu Gln His Glu Glu Glu Val Leu Phe Lys Asp Ile Leu Asp Lys Ile
        275                 280                 285

Glu Leu Ile Gly Asn Glu Asn His Gly Leu Tyr Leu Ala Asp Gln Tyr
    290                 295                 300

Val Lys Gly Ile Ala Lys Ser Arg Lys Ser
305                 310
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<210> 8
<211> 945
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<400> 8

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atggtcccct gtaccctgct gctgctgctg gctgctgcac tggcacctac tcagactcgg       60

gcccaccatc atcaccatca ctcaaaaagt tacccctacg atgtccccga ctacgccagg      120

accgtgcccc ctatggtgaa cgtcacacgc tcagaagcta gcgagggcaa tatcaccgtg      180

acatgccgag catctgggtt ctatccttgg aacattacac tgagttggag gcaggacggg      240

gtgtccctgt ctcacgatac tcagcagtgg ggcgacgtgc tgccagatgg caatgggacc      300

taccagacat gggtggctac tcggatctcc caggggggagg aacagagatt cacctgctat      360

atggagcata gtggaaacca ctcaacacat cctgtgccat ctggcaaggt gctggtcctg      420

cagagtcact ggcagacatt tcatggatca ggcgatatca ttaagctgct gaacgaacag      480

gtgaacaagg agatgcagtc tagtaacctg tacatgagca tgtcaagctg gtgttataca      540

cactccctgg acggagccgg cctgttcctg tttgatcacg ccgctgagga atacgaacat      600

gctaagaaac tgatcatttt cctgaatgag aacaatgtgc cagtccagct gactagcatt      660

tccgcacccg aacacaagtt cgagggcctg acccagatct ttcagaaagc ctacgaacac      720

gagcagcata tctctgaaag tatcaacaac atcgtggacc acgcaatcaa gagcaaagat      780

catgccacct tcaactttct gcagtggtac gtggccgagc agcacgagga agaggtcctg      840
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tttaaggaca ttctggataa aatcgaactg attggcaatg agaatcacgg gctgtacctg 900

gcagatcagt atgtcaaggg catcgcaaag tcaaggaaat catga 945

<210> 9
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<400> 9
aaaaaacccg ggatggtccc ctgtaccctg ctgctgctgc 40

<210> 10
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<400> 10
gttcgttcag cagcttaatg atatcgcctg atccatgaaa tgtctgccag 50

<210> 11
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<400> 11
ctggcagaca tttcatggat caggcgatat cattaagctg ctgaacgaac 50

<210> 12
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<400> 12
aaaaaaggat cctcatgatt tccttgactt tgcgatgccc ttg 43

<210> 13
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<220>
<221> misc_feature
<222> (7)..(10)
<223> n is a, c, g, or t

<400> 13
acctgcnnnn 10

<210> 14
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<220>
<221> misc_feature
<222> (4)..(8)
<223> n is a, c, g, or t

<400> 14
gacnnnnngt c 11

<210> 15
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<220>
<221> misc_feature
<222> (4)..(8)
<223> n is a, c, g, or t

<400> 15
cctnnnnnag g 11

<210> 16
<211> 167
<212> PRT
<213> Helicobacter pylori

<400> 16

Met Leu Ser Lys Asp Ile Ile Lys Leu Leu Asn Glu Gln Val Asn Lys
1 5 10 15

Glu Met Gln Ser Ser Asn Leu Tyr Met Ser Met Ser Ser Trp Cys Tyr
20 25 30

Thr His Ser Leu Asp Gly Ala Gly Leu Phe Leu Phe Asp His Ala Ala
35 40 45

Glu Glu Tyr Glu His Ala Lys Lys Leu Ile Ile Phe Leu Asn Glu Asn
50 55 60

Asn Val Pro Val Gln Leu Thr Ser Ile Ser Ala Pro Glu His Lys Phe
65 70 75 80

Glu Gly Leu Thr Gln Ile Phe Gln Lys Ala Tyr Glu His Glu Gln His
85 90 95

```
Ile Ser Glu Ser Ile Asn Asn Ile Val Asp His Ala Ile Lys Ser Lys
            100                 105                 110


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


Glu Glu Glu Val Leu Phe Lys Asp Ile Leu Asp Lys Ile Glu Leu Ile
    130                 135                 140


Gly Asn Glu Asn His Gly Leu Tyr Leu Ala Asp Gln Tyr Val Lys Gly
145                 150                 155                 160


Ile Ala Lys Ser Arg Lys Ser
                165


<210>  17
<211>  167
<212>  PRT
<213>  Helicobacter pylori

<400>  17

Met Leu Ser Lys Asp Ile Ile Lys Leu Leu Asn Glu Gln Val Asn Lys
1               5                   10                  15


Glu Met Asn Ser Ser Asn Leu Tyr Met Ser Met Ser Ser Trp Cys Tyr
            20                  25                  30


Thr His Ser Leu Asp Gly Ala Gly Leu Phe Leu Phe Asp His Ala Ala
        35                  40                  45


Glu Glu Tyr Glu His Ala Lys Lys Leu Ile Ile Phe Leu Asn Glu Asn
    50                  55                  60


Asn Val Pro Val Gln Leu Thr Ser Ile Ser Ala Pro Glu His Lys Phe
65                  70                  75                  80


Glu Gly Leu Thr Gln Ile Phe Gln Lys Ala Tyr Glu His Glu Gln His
                85                  90                  95


Ile Ser Glu Ser Ile Asn Asn Ile Val Asp His Ala Ile Lys Ser Lys
            100                 105                 110


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


Glu Glu Glu Val Leu Phe Lys Asp Ile Leu Asp Lys Ile Glu Leu Ile
    130                 135                 140


Gly Asn Glu Asn His Gly Leu Tyr Leu Ala Asp Gln Tyr Val Lys Gly
145                 150                 155                 160


Ile Ala Lys Ser Arg Lys Ser
                165
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<210> 18
<211> 429
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<400> 18
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gcctcaaaaa gttaccccta cgatgtcccc gactacgcca ggaccgtgcc ccctatggtg 120

caggtcacac gctcagaagc tagcgagggc caaatcaccg tgacatgccg agcatctggg 180

ttctatcctt ggaacattaa cctgagttgg aggcaggacg gggtgtccct gtctcacgat 240

actcagcagt ggggcgacgt gctgccagat ggcaatggga cctaccagac atgggtggct 300

actcggatct cccaggggga ggaacagaga ttcacctgct atatggagca tagtggacag 360

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tttcattga 429

<210> 19
<211> 429
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<400> 19
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gcctcaaaaa gttaccccta cgatgtcccc gactacgcca ggaccgtgcc ccctatggtg 120

caggtcacac gctcagaagc tagcgagggc caaatcaccg tgacatgccg agcatctggg 180

ttctatcctt ggaacattaa cctgagttgg aggcaggacg gggtgtccct gtctcacgat 240

actcagcagt ggggcgacgt gctgccagat ggcaatggga cctaccagac atgggtggct 300

actcggatct cccaggggga ggaacagaga ttcacctgct atatggagca tagtggacag 360

cactcaacac atcctgtgcc atctggcaag gtgctggtcc tgcagagtca ctggcagaca 420

tttcattga 429

<210> 20
<211> 142
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial polypeptide

<400> 20

Met Val Pro Cys Thr Leu Leu Leu Leu Leu Ala Ala Ala Leu Ala Pro
1 5 10 15

Thr Gln Thr Arg Ala Ser Lys Ser Tyr Pro Tyr Asp Val Pro Asp Tyr

20 25 30

Ala Arg Thr Val Pro Pro Met Val Gln Val Thr Arg Ser Glu Ala Ser
35 40 45

Glu Gly Gln Ile Thr Val Thr Cys Arg Ala Ser Gly Phe Tyr Pro Trp
50 55 60

Asn Ile Asn Leu Ser Trp Arg Gln Asp Gly Val Ser Leu Ser His Asp
65 70 75 80

Thr Gln Gln Trp Gly Asp Val Leu Pro Asp Gly Asn Gly Thr Tyr Gln
85 90 95

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

Cys Tyr Met Glu His Ser Gly Gln His Ser Thr His Pro Val Pro Ser
115 120 125

Gly Lys Val Leu Val Leu Gln Ser His Trp Gln Thr Phe His
130 135 140

<210> 21
<211> 10
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<220>
<221> misc_feature
<222> (7)..(10)
<223> n is a, c, g, or t

<400> 21
acctgcnnnn 10

<210> 22
<211> 11
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<220>
<221> misc_feature
<222> (4)..(8)
<223> n is a, c, g, or t

<400> 22
gacnnnnngt c 11

<210> 23
<211> 40

<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<400> 23
aaaaaaagat ctatggtccc ctgtaccctg ctgctgctgc 40

<210> 24
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Artificial polynucleotide

<400> 24
aaaaaagaat tctcaatgaa atgtctgcca gtgactctgc 40

<210> 25
<211> 142
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial polypeptide

<400> 25

Met Val Pro Cys Thr Leu Leu Leu Leu Leu Ala Ala Ala Leu Ala Pro
1 5 10 15

Thr Gln Thr Arg Ala Ser Lys Ser Tyr Pro Tyr Asp Val Pro Asp Tyr
20 25 30

Ala Arg Thr Val Pro Pro Met Val Gln Val Thr Arg Ser Glu Ala Ser
35 40 45

Glu Gly Gln Ile Thr Val Thr Cys Arg Ala Ser Gly Phe Tyr Pro Trp
50 55 60

Asn Ile Asn Leu Ser Trp Arg Gln Asp Gly Val Ser Leu Ser His Asp
65 70 75 80

Thr Gln Gln Trp Gly Asp Val Leu Pro Asp Gly Asn Gly Thr Tyr Gln
85 90 95

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

Cys Tyr Met Glu His Ser Gly Gln His Ser Thr His Pro Val Pro Ser
115 120 125

Gly Lys Val Leu Val Leu Gln Ser His Trp Gln Thr Phe His
130 135 140

<210> 26

<211> 128
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial polypeptide

<400> 26

Met Ala Pro Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu His
1 5 10 15

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

Thr Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met Phe
35 40 45

Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr Lys
50 55 60

Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr Met
65 70 75 80

Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr Ser
85 90 95

Cys Ala Thr Gln Ile Ile Thr Phe Glu Ser Phe Lys Glu Asn Leu Lys
100 105 110

Asp Phe Leu Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln Glu
115 120 125

<210> 27
<211> 125
<212> PRT
<213> Artificial Sequence

<220>
<223> Artificial polypeptide

<400> 27

Met Ala Pro Thr Arg Ser Pro Ile Thr Val Thr Arg Pro Trp Lys His
1 5 10 15

Val Glu Ala Ile Lys Glu Ala Leu Asn Leu Leu Asp Asp Met Pro Val
20 25 30

Thr Leu Asn Glu Glu Val Glu Val Val Ser Asn Glu Phe Ser Phe Lys
35 40 45

Lys Leu Thr Cys Val Gln Thr Arg Leu Lys Ile Phe Glu Gln Gly Leu
50 55 60

Arg Gly Asn Phe Thr Lys Leu Lys Gly Ala Leu Asn Met Thr Ala Ser
65 70 75 80

Tyr Tyr Gln Thr Tyr Cys Pro Pro Thr Pro Glu Thr Asp Cys Glu Thr
85 90 95

Gln Val Thr Thr Tyr Ala Asp Phe Ile Asp Ser Leu Lys Thr Phe Leu
100 105 110

Thr Asp Ile Pro Phe Glu Cys Lys Lys Pro Val Gln Lys
115 120 125

<210> 28
<211> 781
<212> DNA
<213> Homo sapiens

<400> 28
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