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<130> NP0386WO

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<151> 2018-06-20

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<151> 2018-06-20

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<170> PatentIn version 3.5

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        35                  40                  45


Arg Glu Ala Glu Glu Asn Arg Glu Pro Phe Arg Lys Glu Cys Thr Trp
    50                  55                  60


Gln Val Lys Ala Asn Asp Arg Lys Tyr His Glu Gln Pro His Phe Met
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Asn Thr Lys Phe Leu Cys Ile Lys Glu Ser Lys Tyr Ala Asn Asn Ala
                85                  90                  95


Ile Lys Thr Tyr Lys Tyr Asn Ala Phe Thr Phe Ile Pro Met Asn Leu
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Phe Glu Gln Phe Lys Arg Ala Ala Asn Leu Tyr Phe Leu Ala Leu Leu
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Leu Val Pro Leu Leu Val Val Leu Gly Val Thr Ala Ile Lys Asp Leu
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Val Asp Asp Val Ala Arg His Lys Met Asp Lys Glu Ile Asn Asn Arg
                165                 170                 175

Thr Cys Glu Val Ile Lys Asp Gly Arg Phe Lys Val Ala Lys Trp Lys
            180                 185                 190

Glu Ile Gln Val Gly Asp Val Ile Arg Leu Lys Lys Asn Asp Phe Val
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Pro Ala Asp Ile Leu Leu Leu Ser Ser Ser Glu Pro Asn Ser Leu Cys
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Tyr Val Glu Thr Ala Glu Leu Asp Gly Glu Thr Asn Leu Lys Phe Lys
225                 230                 235                 240

Met Ser Leu Glu Ile Thr Asp Gln Tyr Leu Gln Arg Glu Asp Thr Leu
                245                 250                 255

Ala Thr Phe Asp Gly Phe Ile Glu Cys Glu Glu Pro Asn Asn Arg Leu
            260                 265                 270

Asp Lys Phe Thr Gly Thr Leu Phe Trp Arg Asn Thr Ser Phe Pro Leu
        275                 280                 285

Asp Ala Asp Lys Ile Leu Leu Arg Gly Cys Val Ile Arg Asn Thr Asp
    290                 295                 300
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Phe Cys His Gly Leu Val Ile Phe Ala Gly Ala Asp Thr Lys Ile Met
305                 310                 315                 320

Lys Asn Ser Gly Lys Thr Arg Phe Lys Arg Thr Lys Ile Asp Tyr Leu
                325                 330                 335

Met Asn Tyr Met Val Tyr Thr Ile Phe Val Val Leu Ile Leu Leu Ser
            340                 345                 350

Ala Gly Leu Ala Ile Gly His Ala Tyr Trp Glu Ala Gln Val Gly Asn
        355                 360                 365

Ser Ser Trp Tyr Leu Tyr Asp Gly Glu Asp Asp Thr Pro Ser Tyr Arg
    370                 375                 380

Gly Phe Leu Ile Phe Trp Gly Tyr Ile Ile Val Leu Asn Thr Met Val
385                 390                 395                 400

Pro Ile Ser Leu Tyr Val Ser Val Glu Val Ile Arg Leu Gly Gln Ser
                405                 410                 415

His Phe Ile Asn Trp Asp Leu Gln Met Tyr Tyr Ala Glu Lys Asp Thr
            420                 425                 430

Pro Ala Lys Ala Arg Thr Thr Thr Leu Asn Glu Gln Leu Gly Gln Ile
        435                 440                 445

His Tyr Ile Phe Ser Asp Lys Thr Gly Thr Leu Thr Gln Asn Ile Met
    450                 455                 460

Thr Phe Lys Lys Cys Cys Ile Asn Gly Gln Ile Tyr Gly Asp His Arg
465                 470                 475                 480

Asp Ala Ser Gln His Asn His Asn Lys Ile Glu Gln Val Asp Phe Ser
                485                 490                 495

Trp Asn Thr Tyr Ala Asp Gly Lys Leu Ala Phe Tyr Asp His Tyr Leu
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Ile Glu Gln Ile Gln Ser Gly Lys Glu Pro Glu Val Arg Gln Phe Phe
        515                 520                 525

Phe Leu Leu Ala Val Cys His Thr Val Met Val Asp Arg Thr Asp Gly
    530                 535                 540

Gln Leu Asn Tyr Gln Ala Ala Ser Pro Asp Glu Gly Ala Leu Val Asn
545                 550                 555                 560

Ala Ala Arg Asn Phe Gly Phe Ala Phe Leu Ala Arg Thr Gln Asn Thr
                565                 570                 575

Ile Thr Ile Ser Glu Leu Gly Thr Glu Arg Thr Tyr Asn Val Leu Ala
            580                 585                 590

Ile Leu Asp Phe Asn Ser Asp Arg Lys Arg Met Ser Ile Ile Val Arg
        595                 600                 605

Thr Pro Glu Gly Asn Ile Lys Leu Tyr Cys Lys Gly Ala Asp Thr Val
    610                 615                 620

Ile Tyr Glu Arg Leu His Arg Met Asn Pro Thr Lys Gln Glu Thr Gln
625                 630                 635                 640

Asp Ala Leu Asp Ile Phe Ala Asn Glu Thr Leu Arg Thr Leu Cys Leu
                645                 650                 655

Cys Tyr Lys Glu Ile Glu Glu Lys Glu Phe Thr Glu Trp Asn Lys Lys
            660                 665                 670

Phe Met Ala Ala Ser Val Ala Ser Thr Asn Arg Asp Glu Ala Leu Asp
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Lys Val Tyr Glu Glu Ile Glu Lys Asp Leu Ile Leu Leu Gly Ala Thr
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Ala Ile Glu Asp Lys Leu Gln Asp Gly Val Pro Glu Thr Ile Ser Lys
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Leu Ala Lys Ala Asp Ile Lys Ile Trp Val Leu Thr Gly Asp Lys Lys
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Glu Thr Ala Glu Asn Ile Gly Phe Ala Cys Glu Leu Leu Thr Glu Asp
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Thr Thr Ile Cys Tyr Gly Glu Asp Ile Asn Ser Leu Leu His Ala Arg
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Met Glu Asn Gln Arg Asn Arg Gly Gly Val Tyr Ala Lys Phe Ala Pro
    770                 775                 780


Pro Val Gln Glu Ser Phe Phe Pro Pro Gly Gly Asn Arg Ala Leu Ile
785                 790                 795                 800


Ile Thr Gly Ser Trp Leu Asn Glu Ile Leu Leu Glu Lys Lys Thr Lys
                805                 810                 815


Arg Asn Lys Ile Leu Lys Leu Lys Phe Pro Arg Thr Glu Glu Glu Arg
            820                 825                 830


Arg Met Arg Thr Gln Ser Lys Arg Arg Leu Glu Ala Lys Lys Glu Gln
        835                 840                 845


Arg Gln Lys Asn Phe Val Asp Leu Ala Cys Glu Cys Ser Ala Val Ile
    850                 855                 860


Cys Cys Arg Val Thr Pro Lys Gln Lys Ala Met Val Val Asp Leu Val
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Lys Arg Tyr Lys Lys Ala Ile Thr Leu Ala Ile Gly Asp Gly Ala Asn
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Asp Val Asn Met Ile Lys Thr Ala His Ile Gly Val Gly Ile Ser Gly
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Gln Glu Gly Met Gln Ala Val Met Ser Ser Asp Tyr Ser Phe Ala Gln
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Phe Arg Tyr Leu Gln Arg Leu Leu Leu Val His Gly Arg Trp Ser Tyr
    930                 935                 940

Ile Arg Met Cys Lys Phe Leu Arg Tyr Phe Phe Tyr Lys Asn Phe Ala
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Phe Thr Leu Val His Phe Trp Tyr Ser Phe Phe Asn Gly Tyr Ser Ala
                965                 970                 975

Gln Thr Ala Tyr Glu Asp Trp Phe Ile Thr Leu Tyr Asn Val Leu Tyr
            980                 985                 990

Thr Ser Leu Pro Val Leu Leu Met  Gly Leu Leu Asp Gln  Asp Val Ser
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Asp Lys  Leu Ser Leu Arg Phe  Pro Gly Leu Tyr Ile  Val Gly Gln
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Arg Asp  Leu Leu Phe Asn Tyr  Lys Arg Phe Phe Val  Ser Leu Leu
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His Gly  Val Leu Thr Ser Met  Ile Leu Phe Phe Ile  Pro Leu Gly
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Ala Tyr  Leu Gln Thr Val Gly  Gln Asp Gly Glu Ala  Pro Ser Asp
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Tyr Gln  Ser Phe Ala Val Thr  Ile Ala Ser Ala Leu  Val Ile Thr
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Val Asn  Phe Gln Ile Gly Leu  Asp Thr Ser Tyr Trp  Thr Phe Val
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Asn Ala  Phe Ser Ile Phe Gly  Ser Ile Ala Leu Tyr  Phe Gly Ile
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Pro Val  Val Ala Ile Arg Phe  Leu Ser Met Thr Ile  Trp Pro Ser
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Glu Ser  Asp Lys Ile Gln Lys  His Arg Lys Arg Leu  Lys Ala Glu
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Glu Gln  Trp Gln Arg Arg Gln  Gln Val Phe Arg Arg  Gly Val Ser
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Thr Arg  Arg Ser Ala Tyr Ala  Phe Ser His Gln Arg  Gly Tyr Ala
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Asp Leu  Ile Ser Ser Gly Arg  Ser Ile Arg Lys Lys  Arg Ser Pro
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35 40 45

Gln Leu Phe Arg Phe Ser Ser Ser Thr Asp Ile Trp Leu Met Phe Val
50 55 60

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Gly Ser Leu Cys Ala Phe Leu His Gly Ile Ala Gln Pro Gly Val Leu
65                  70                  75                  80

Leu Ile Phe Gly Thr Met Thr Asp Val Phe Ile Asp Tyr Asp Val Glu
                85                  90                  95

Leu Gln Glu Leu Gln Ile Pro Gly Lys Ala Cys Val Asn Asn Thr Ile
            100                 105                 110

Val Trp Thr Asn Ser Ser Leu Asn Gln Asn Met Thr Asn Gly Thr Arg
        115                 120                 125

Cys Gly Leu Leu Asn Ile Glu Ser Glu Met Ile Lys Phe Ala Ser Tyr
    130                 135                 140

Tyr Ala Gly Ile Ala Val Ala Val Leu Ile Thr Gly Tyr Ile Gln Ile
145                 150                 155                 160

Cys Phe Trp Val Ile Ala Ala Ala Arg Gln Ile Gln Lys Met Arg Lys
                165                 170                 175

Phe Tyr Phe Arg Arg Ile Met Arg Met Glu Ile Gly Trp Phe Asp Cys
            180                 185                 190

Asn Ser Val Gly Glu Leu Asn Thr Arg Phe Ser Asp Asp Ile Asn Lys
        195                 200                 205

Ile Asn Asp Ala Ile Ala Asp Gln Met Ala Leu Phe Ile Gln Arg Met
    210                 215                 220

Thr Ser Thr Ile Cys Gly Phe Leu Leu Gly Phe Phe Arg Gly Trp Lys
225                 230                 235                 240

Leu Thr Leu Val Ile Ile Ser Val Ser Pro Leu Ile Gly Ile Gly Ala
                245                 250                 255

Ala Thr Ile Gly Leu Ser Val Ser Lys Phe Thr Asp Tyr Glu Leu Lys
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Ala Tyr Ala Lys Ala Gly Val Val Ala Asp Glu Val Ile Ser Ser Met
        275                 280                 285

Arg Thr Val Ala Ala Phe Gly Gly Glu Lys Arg Glu Val Glu Arg Tyr
    290                 295                 300

Glu Lys Asn Leu Val Phe Ala Gln Arg Trp Gly Ile Arg Lys Gly Ile
305                 310                 315                 320

Val Met Gly Phe Phe Thr Gly Phe Val Trp Cys Leu Ile Phe Leu Cys
                325                 330                 335

Tyr Ala Leu Ala Phe Trp Tyr Gly Ser Thr Leu Val Leu Asp Glu Gly
            340                 345                 350

Glu Tyr Thr Pro Gly Thr Leu Val Gln Ile Phe Leu Ser Val Ile Val
        355                 360                 365

Gly Ala Leu Asn Leu Gly Asn Ala Ser Pro Cys Leu Glu Ala Phe Ala
    370                 375                 380

Thr Gly Arg Ala Ala Ala Thr Ser Ile Phe Glu Thr Ile Asp Arg Lys
385                 390                 395                 400

Pro Ile Ile Asp Cys Met Ser Glu Asp Gly Tyr Lys Leu Asp Arg Ile
                405                 410                 415

Lys Gly Glu Ile Glu Phe His Asn Val Thr Phe His Tyr Pro Ser Arg
            420                 425                 430

Pro Glu Val Lys Ile Leu Asn Asp Leu Asn Met Val Ile Lys Pro Gly
        435                 440                 445

Glu Met Thr Ala Leu Val Gly Pro Ser Gly Ala Gly Lys Ser Thr Ala
    450                 455                 460
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Leu Gln Leu Ile Gln Arg Phe Tyr Asp Pro Cys Glu Gly Met Val Thr
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Val Asp Gly His Asp Ile Arg Ser Leu Asn Ile Gln Trp Leu Arg Asp
                485                 490                 495

Gln Ile Gly Ile Val Glu Gln Glu Pro Val Leu Phe Ser Thr Thr Ile
            500                 505                 510

Ala Glu Asn Ile Arg Tyr Gly Arg Glu Asp Ala Thr Met Glu Asp Ile
        515                 520                 525

Val Gln Ala Ala Lys Glu Ala Asn Ala Tyr Asn Phe Ile Met Asp Leu
    530                 535                 540

Pro Gln Gln Phe Asp Thr Leu Val Gly Glu Gly Gly Gly Gln Met Ser
545                 550                 555                 560

Gly Gly Gln Lys Gln Arg Val Ala Ile Ala Arg Ala Leu Ile Arg Asn
                565                 570                 575

Pro Lys Ile Leu Leu Leu Asp Met Ala Thr Ser Ala Leu Asp Asn Glu
            580                 585                 590

Ser Glu Ala Met Val Gln Glu Val Leu Ser Lys Ile Gln His Gly His
        595                 600                 605

Thr Ile Ile Ser Val Ala His Arg Leu Ser Thr Val Arg Ala Ala Asp
    610                 615                 620

Thr Ile Ile Gly Phe Glu His Gly Thr Ala Val Glu Arg Gly Thr His
625                 630                 635                 640

Glu Glu Leu Leu Glu Arg Lys Gly Val Tyr Phe Thr Leu Val Thr Leu
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Gln Ser Gln Gly Asn Gln Ala Leu Asn Glu Glu Asp Ile Lys Asp Ala
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            660                 665                 670

Thr Glu Asp Asp Met Leu Ala Arg Thr Phe Ser Arg Gly Ser Tyr Gln
        675                 680                 685

Asp Ser Leu Arg Ala Ser Ile Arg Gln Arg Ser Lys Ser Gln Leu Ser
    690                 695                 700

Tyr Leu Val His Glu Pro Pro Leu Ala Val Val Asp His Lys Ser Thr
705                 710                 715                 720

Tyr Glu Glu Asp Arg Lys Asp Lys Asp Ile Pro Val Gln Glu Glu Val
                725                 730                 735

Glu Pro Ala Pro Val Arg Arg Ile Leu Lys Phe Ser Ala Pro Glu Trp
            740                 745                 750

Pro Tyr Met Leu Val Gly Ser Val Gly Ala Ala Val Asn Gly Thr Val
        755                 760                 765

Thr Pro Leu Tyr Ala Phe Leu Phe Ser Gln Ile Leu Gly Thr Phe Ser
    770                 775                 780

Ile Pro Asp Lys Glu Glu Gln Arg Ser Gln Ile Asn Gly Val Cys Leu
785                 790                 795                 800

Leu Phe Val Ala Met Gly Cys Val Ser Leu Phe Thr Gln Phe Leu Gln
                805                 810                 815

Gly Tyr Ala Phe Ala Lys Ser Gly Glu Leu Leu Thr Lys Arg Leu Arg
            820                 825                 830

Lys Phe Gly Phe Arg Ala Met Leu Gly Gln Asp Ile Ala Trp Phe Asp
        835                 840                 845

Asp Leu Arg Asn Ser Pro Gly Ala Leu Thr Thr Arg Leu Ala Thr Asp
    850                 855                 860
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Ala Ser Gln Val Gln Gly Ala Ala Gly Ser Gln Ile Gly Met Ile Val
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Asn Ser Phe Thr Asn Val Thr Val Ala Met Ile Ile Ala Phe Ser Phe
                885                 890                 895


Ser Trp Lys Leu Ser Leu Val Ile Leu Cys Phe Phe Pro Phe Leu Ala
            900                 905                 910


Leu Ser Gly Ala Thr Gln Thr Arg Met Leu Thr Gly Phe Ala Ser Arg
        915                 920                 925


Asp Lys Gln Ala Leu Glu Met Val Gly Gln Ile Thr Asn Glu Ala Leu
    930                 935                 940


Ser Asn Ile Arg Thr Val Ala Gly Ile Gly Lys Glu Arg Arg Phe Ile
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Glu Ala Leu Glu Thr Glu Leu Glu Lys Pro Phe Lys Thr Ala Ile Gln
                965                 970                 975


Lys Ala Asn Ile Tyr Gly Phe Cys Phe Ala Phe Ala Gln Cys Ile Met
            980                 985                 990


Phe Ile Ala Asn Ser Ala Ser Tyr  Arg Tyr Gly Gly Tyr  Leu Ile Ser
        995                 1000                1005


Asn Glu  Gly Leu His Phe Ser  Tyr Val Phe Arg Val  Ile Ser Ala
    1010                1015                1020


Val Val  Leu Ser Ala Thr Ala  Leu Gly Arg Ala Phe  Ser Tyr Thr
    1025                1030                1035


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