SEQUENCE LISTING

<110> The Wistar Institute of Anatomy and Biology
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<120> Compositions and Methods of Replication Deficient Adenoviral Vectors for Vaccine Applications

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35 40 45

Ala Ser Ser Arg Gly Lys Ser Asp Val Lys Arg Gly Val Val Thr Arg
50 55 60

Lys Tyr Ser Ile Phe Pro Arg Ser Leu Thr Gly Asn Glu Val Phe Leu
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Gly Gly Cys Lys Lys Arg Ala Ile Phe Ala Arg Lys Leu Asn Glu Glu
85 90 95

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

Gly Arg Val Asp Phe Asp Arg Leu Arg Gly Gly Phe Asp Tyr Arg Ile
115 120 125

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Leu Arg Arg Lys Leu Arg Ser Pro Asp Pro Leu Trp Cys Thr Leu Ser
                165                 170                 175

Thr Ile Cys Ser Asp Ala Ala Leu Ser Gln Tyr Leu Leu Pro Ala Cys
            180                 185                 190

Val Leu Glu Val Ala Glu Cys Ala Ser Lys Ile Ala Thr Thr Arg Gln
        195                 200                 205

Gly Leu Thr Asp Asn Cys Met Lys Asn Leu Leu Arg Val Arg Arg Phe
    210                 215                 220

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Ser Met Pro Ser Thr Pro Pro Ile Asp Val Asn Asp Gly Lys Trp Pro
                245                 250                 255

Ala Trp His Tyr Ala Gln Tyr Met Thr Leu Trp Asp Phe Pro Thr Trp
            260                 265                 270

Gln Tyr Ile Tyr Val Leu Val Ile Ala Ile Thr Met Val Met Arg Phe
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Trp Gln Tyr Ile Asn Gly Arg Gly Arg Phe Asp Ser Arg Gly Phe Pro
    290                 295                 300

Ser Leu His Pro Ile Asp Val Asn Gly Ser Leu Phe Trp His Gln Asn
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Leu Asn Gly Ser Leu Ala Glu Glu Glu Ile Ile Val Arg Ser Glu Asn
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Val Gly Arg Ala Met Tyr Ala Pro Pro Ile Glu Gly Asn Ile Thr Cys
            820                 825                 830

Lys Ser Asn Ile Thr Gly Leu Leu Leu Thr Trp Asp Gly Gly Glu Asn
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Ser Thr Glu Gly Val Phe Arg Pro Gly Gly Gly Asn Met Lys Asp Asn
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Trp Arg Ser Glu Leu Tyr Lys Tyr Lys Val Val Glu Ile Lys Pro Leu
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Gly Val Ala Pro Thr Lys Ser Lys Leu Thr Val Gln Ala Arg Gln Leu
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Leu Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
            900                 905                 910

Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys Gln Leu
        915                 920                 925

Gln Thr Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln Gln Leu
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Asn Met Thr Trp Met Gln Trp Asp Arg Glu Ile Ser Asn Tyr Thr Asn
            980                 985                 990

Thr Ile Phe Arg Leu Leu Glu Asp  Ser Gln Asn Gln Gln  Glu Lys Asn
        995                 1000                1005

Glu Lys  Asp Leu Leu Ala Leu  Asp Ser Trp Lys Asn  Leu Trp Asn
    1010                1015                1020

Trp Phe  Asp Ile Thr Asn Trp  Leu Trp Gly Thr Ser  Arg Val Asp
    1025                1030                1035

Pro Gly  Gly Gln Thr Ala Asp  Gln Pro Arg Leu Cys  Leu Leu Val
    1040                1045                1050

Ala Ser  His Leu Leu Phe Ala  Pro Pro Pro Cys Leu  Pro Pro Trp
    1055                1060                1065

Lys Val  Pro Leu Pro Leu Ser  Phe Pro Asn Lys Met  Arg Lys Leu
    1070                1075                1080

His Arg  Ile Val Val Gly Val  Ile Leu Phe Trp Gly  Val Gly Trp
    1085                1090                1095

Gly Arg  Thr Ala Arg Gly Arg  Ile Gly Lys Thr Ile  Ala Gly Met
    1100                1105                1110

Leu Gly  Met Arg Trp Ala Leu  Trp Leu Leu Arg Arg  Lys Glu Pro
    1115                1120                1125

Ala Asp  Leu Gln Ile Ile His  Leu Cys Arg Val Arg  Arg Lys Arg
    1130                1135                1140

Asn Gly  Ile Met Gly Ile Met  Gly Leu His Ile Gly  Gln Ile Ser
    1145                1150                1155
```

```
Thr Tyr  Ala Gly His Arg Ala  Cys Gly Leu Ala Pro  Pro Gln Asp
    1160                1165                1170

Met Ala  Arg Val Arg Ala Gln  Arg His Asp Pro Leu  Gln Cys Ala
    1175                1180                1185

Pro Gly  Leu Pro Pro Arg His  Val His Ala Leu Pro  Val Gln His
    1190                1195                1200

Ala Ile  Cys Glu Gly Ala Ala  Gly Ala Arg Cys His  Val Gln Ser
    1205                1210                1215

Glu Pro  Asp Gly Gly Val His  Glu Cys Gly Ala Val  Glu Asn Ser
    1220                1225                1230

Glu Ile  Ile Gln Asp Gln Val  Pro Gly Leu Arg Met  Arg Arg Gln
    1235                1240                1245

Ala Arg  Gln Ala Ser Ala Arg  Val Cys Gly Gly Asp  Gly Gly Pro
    1250                1255                1260

Ala Thr  Arg Ser Phe Gly Val  Val Leu Gln Arg Asp  Gly Val Arg
    1265                1270                1275

Leu Gln  Arg Gly Arg Ile Leu  Glu Val Val Phe Gly  Ala Gly Cys
    1280                1285                1290

Glu Pro  Ala Gly Ala Glu Leu  Lys Ser Val Val Phe  Cys Val Leu
    1295                1300                1305

Gln Gln  His Glu Arg Lys Arg  Leu Leu Gly Arg Gly  Ile Gln Pro
    1310                1315                1320

Leu Ser  Asp Gly Ala Ser Pro  Leu Leu Gly Gly Ser  Ala Ser Glu
    1325                1330                1335

Cys Asp  Gly Ile His Gly Gly  Arg Pro Ala Arg Ala  Ala Arg Glu
    1340                1345                1350
```

```
Leu Phe  Asn Pro Asp Leu Arg  Asp Pro Glu Leu Leu  Val Arg Gly
    1355                1360                1365

Arg Ser  Cys Arg Arg Ser Cys  Cys Phe Arg Arg Gln  Arg Arg Ala
    1370                1375                1380

Arg Asn  Gly Pro Gly Arg Arg  Leu Leu Gln Leu Ser  Gly Gly Gln
    1385                1390                1395

Leu Glu  Phe His Gln Ser Arg  Gln Pro Glu Arg Gly  Glu Ala Ala
    1400                1405                1410

Ala Ala  Asp Gly Pro Ala Arg  Gly Pro Asp Pro Ala  Pro Gly Arg
    1415                1420                1425

Ala Asp  Pro Ala Gly Gly Ser  Ala Ala Gly Gly Asp  Ala Gly Arg
    1430                1435                1440

Gly Cys  His Gly Glu Asn Gln  Ile Lys Asn Glu Ser  Ile Asn Lys
    1445                1450                1455

Arg Arg  Arg Leu Leu Ile Leu  Thr Gln Ser Leu Glu  Ser Leu Phe
    1460                1465                1470

Asp Phe  Ser Arg Ala Val Gly  Pro Gly Pro Pro Val  Ser Ile Ile
    1475                1480                1485

Glu His  Pro Val Asp Leu Phe  Gln Asp Pro Val Glu  Val Gly Leu
    1490                1495                1500

Asp Val  Glu Val His Gly His  Glu Pro Val Pro Gly  Val Glu Val
    1505                1510                1515

Ala Pro  Leu Gln Gly Leu Val  Leu Gly Asp Gly Val  Val Asn His
    1520                1525                1530

Pro Val  Ile Ala Gly Ala Gln  Gly Val Val Leu His  Asp Val Leu
    1535                1540                1545
```

```
Glu Glu  Glu Thr Asp Gly His  Gly Gln Pro Leu Gly  Val Gly Val
    1550                1555                1560


Asp Glu  Pro Val Glu Leu Gly  Gly Met His Ala Gly  Gly Asp Glu
    1565                1570                1575


Met His  Leu Gly Leu Asp Leu  Glu Ile Gly Asp Val  Pro Ala Gln
    1580                1585                1590


Ile Pro  Pro Gly Val His Val  Val Gln Asp His Gln  His Gly Val
    1595                1600                1605


Ser Gly  Ala Leu Gly Glu Phe  Val Met Gln Leu Gly  Arg Glu Gly
    1610                1615                1620


Val Lys  Glu Phe Gly Asp Ala  Leu Val Thr Ala Gln  Val Phe His
    1625                1630                1635


Ala Leu  Ile His Asp Asp Gly  Asp Gly Pro Val Gly  Gly Gly Leu
    1640                1645                1650


Gly Lys  Asp Val Ser Gly Val  Gly His Ile Val Val  Val Val Leu
    1655                1660                1665


Gly Glu  Leu Val Ile Gly His  Phe Asn Glu Phe Gly  Ala Glu Gly
    1670                1675                1680


Ala Arg  Leu Gly Asp Glu Gly  Ala Leu Asp Pro Gly  Gly Val Val
    1685                1690                1695


Ala Leu  Ala Asp Leu His Leu  Pro Gly Leu Glu Leu  Gly Gly Gly
    1700                1705                1710


Asp His  Val His Leu Arg Gly  Asp Glu Lys Asn Gly  Phe Arg Gly
    1715                1720                1725


Gly Gly  Asp Glu Leu Gly Arg  Lys Gln Val Pro Glu  Gln Leu Gly
    1730                1735                1740
```

```
Leu Ala  Ala Thr Gly Gly Ala  Val Asp Asp Pro Asp  Asp Arg Leu
    1745                1750                1755


Gln Val  Val Val Glu Gly Glu  Thr Ala Ala Val Leu  Ala Glu Glu
    1760                1765                1770


Gly Gly  His Leu Val His His  Leu Ala His Met His  Val Leu Ala
    1775                1780                1785


His Glu  Phe Arg Gln Glu Ala  Leu Ala Pro Gln Arg  Glu Glu Leu
    1790                1795                1800


Leu Gln  Arg Gly Glu Val Phe  Gln Arg Leu Glu Ser  Val Gly His
    1805                1810                1815


Gly His  Phe Gly Glu Gly Leu  Leu Gln Glu Phe Gln  Thr Val Pro
    1820                1825                1830


Glu Leu  Gly Asp Val Leu Gly  Ile Ser Ile Gln Gln  Thr Ser Ser
    1835                1840                1845


Phe Arg  Gly Leu Gly Arg Leu  Arg Glu Gly Thr Arg  Arg Trp Ala
    1850                1855                1860


Ser Ser  Glu Ala Arg Val Arg  Ser Phe Gln Gly Arg  Arg Val Arg
    1865                1870                1875


Val Ser  Val Val Ser Val Thr  Val Lys Gly Cys Ala  Pro Gly Trp
    1880                1885                1890


Ala Leu  Ala Arg Val Arg Phe  Arg Leu Ile Arg Leu  Val Glu Asn
    1895                1900                1905


Arg Ser  Arg Ser Ala Pro Cys  Ala Ser Ala Arg Gln  Leu Ser Met
    1910                1915                1920


Ser Ser  Leu Ser Ala Ser Ala  Ala Trp Pro Leu Ala  Arg Ser Leu
    1925                1930                1935
```

```
Pro Leu  Glu Val Cys Pro Gln  Thr Gly Gln Arg Arg  Asp Leu Arg
    1940                1945                1950

Ala Ser  Leu Gly Ala Arg Lys  Thr Asp Ser Gly Ala  Ala Ser Ala
    1955                1960                1965

Pro Gln  Leu Ala Gln Thr Val  Ser His Ser Thr Ser  Gln Val Arg
    1970                1975                1980

Ser Gly  Arg Leu Gly Ser Lys  Thr Arg Phe Pro Pro  Cys Phe Leu
    1985                1990                1995

Met Arg  Phe Leu Pro Leu Val  Ser Met Ser Ser Cys  Pro Arg Trp
    2000                2005                2010

Val Thr  Lys Arg Leu Ser Val  Ser Pro Thr Asp Phe  Met Gly Arg
    2015                2020                2025

Ser Ser  Ser Gly Val Pro Arg  Ser Ser Ser Arg Asn  Pro Ala His
    2030                2035                2040

Ser Glu  Thr Lys Ala Arg Val  Gln Ala Ser Thr Lys  Glu Ala Thr
    2045                2050                2055

Trp Glu  Gly Arg Ser Leu Ser  Thr Ser Gly Ser Thr  Phe Ser Arg
    2060                2065                2070

Val Cys  Lys His Met Ser Pro  Ser Ser Thr Ser Arg  Lys Val Ile
    2075                2080                2085

Gly Leu  Val Ala Thr Pro Gly  Val Pro Ala Gly Gly  Val Lys Gly
    2090                2095                2100

Ala Gly  Pro Cys Ser Ser Ser  Leu Ser Ser Gly Ser  Leu Ser Arg
    2105                2110                2115

Ser Ala  Ser Cys Trp Gly Arg  Tyr Ser Leu Ser Lys  Ala Gly Met
    2120                2125                2130
```

```
Thr Ser  Ala Leu Arg Leu Ser  Val Ser Arg Asn Glu  Glu Asp Leu
    2135                2140                2145


Ile Leu  Thr Val Pro Leu Glu  Thr Pro Phe Met Ser  Pro Ser Ser
    2150                2155                2160


Ile Trp  Ser Glu Lys Thr Ile  Phe Leu Leu Ser Ser  Leu Val Ala
    2165                2170                2175


Lys Glu  Pro Arg Ala Leu Glu  Ser Ser Leu Ala Met  Glu Arg Met
    2180                2185                2190


Val Trp  Phe Phe Ser Leu Ser  Ala Arg Ser Leu Ala  Ala Met Leu
    2195                2200                2205


Ser Cys  Thr Tyr Ser Arg Ala  Thr His Phe His Ser  Gly Lys Thr
    2210                2215                2220


Val Val  Ser Ser Ser Gly Thr  Ile Leu Thr Arg Gln  Pro Arg Leu
    2225                2230                2235


Cys Arg  Val Met Arg Ser Thr  Leu Val Ala Thr Ser  Pro Arg Arg
    2240                2245                2250


Gly Ser  Leu Val Gln Gln Arg  Arg Pro Pro Leu Arg  Glu Gln Lys
    2255                2260                2265


Gly Gly  Ser Gly Ser Ser Met  Ser Ser Ser Gly Gly  Ser Ala Ser
    2270                2275                2280


Thr Val  Lys Met Pro Gly Arg  Ser Ser Gly Ser Lys  Leu Met Gln
    2285                2290                2295


Val Pro  Arg Leu Ser Ser Ala  Ala Cys Gln Ser Arg  Thr Ala Ser
    2300                2305                2310


Ala Arg  Ser Gly Leu Arg Gly  Val Pro Gln Gly Met  Gly Cys Val
    2315                2320                2325
```

```
Ser Ala  Glu Ala Tyr Met Pro  Gln Met Ser Thr Arg  Gly Ser Ser
    2330                2335                2340


Arg Thr  Pro Met Val Gly Gln  Arg Pro Pro Arg Met  Leu Ala Arg
    2345                2350                2355


Thr Ser  Tyr Ser Ser Cys Glu  Gly Ala Arg Ser Pro  Val Pro Arg
    2360                2365                2370


Leu Glu  Arg Cys Gly Phe Ser  Ala Arg Thr Ile Trp  Arg Lys Met
    2375                2380                2385


Ala Trp  Glu Leu Glu Glu Met  Val Gly Leu Trp Lys  Met Leu Lys
    2390                2395                2400


Trp Ala  Trp Gly Arg Pro Thr  Glu Ser Leu Met Lys  Trp Ala Glu
    2405                2410                2415


Ser Cys  Ser Leu Ala Thr Ser  Ser Ala Val Thr Arg  Thr Ser Arg
    2420                2425                2430


Ala Gln  Ser Arg Val Ser Trp  Met Met Ser Tyr Leu  Ser Trp Pro
    2435                2440                2445


Phe Cys  Phe His Ser Ser Arg  Leu Arg Arg Asn Ser  Ser Arg Ser
    2450                2455                2460


Phe Gln  Tyr Ser Ser Arg Gly  Asn Pro Ser Ser Ala  Arg Glu Pro
    2465                2470                2475


Thr Met  Asn Trp Leu Thr Ala  Leu Ala Gln Gln Pro  Phe Ser Thr
    2480                2485                2490


Gly Arg  Ala Ala Cys Ala Ala  Leu Arg Arg Glu Val  Trp Val Arg
    2495                2500                2505


Ala Lys  Val Ser Arg Thr Met  Thr Leu Arg Asn Trp  Cys Leu Lys
    2510                2515                2520
```

```
Ser Arg  Ser Ser Gln Pro Pro  Cys Ser Gln Ser Trp  Lys Ser Val
    2525                2530                2535


Arg Phe  Leu Ala Gly Leu Gly  Lys Ala Lys Val Thr  Ser Leu Lys
    2540                2545                2550


Arg Ile  Leu Pro Ala Arg Gly  Met Lys Leu Arg Val  Met Arg Lys
    2555                2560                2565


Gly Trp  Gly Thr Ser Ala Arg  Leu Leu Met Thr Trp  Ala Ala Arg
    2570                2575                2580


Thr Ile  Ser Ser Lys Pro Leu  Met Leu Cys Pro Thr  Met Ser Ser
    2585                2590                2595


Thr Asn  Arg Gly Arg Pro Leu  Thr Trp Gly Ser Phe  Leu Ser Ser
    2600                2605                2610


Ser Val  Ser Ser Ala Gly Ser  Leu Ser Pro Cys Cys  Ser Arg Ala
    2615                2620                2625


Gln Ser  Ala Thr Trp Gly Leu  Ala Leu Arg Lys Glu  Val Gln Arg
    2630                2635                2640


Ser Thr  Ala Arg Ala Val Cys  Lys Arg Ser Arg Tyr  Arg Asn Cys
    2645                2650                2655


Trp Pro  Thr Ala Ile Phe Ser  Gly Val Thr Gln Lys  Val Arg Gly
    2660                2665                2670


Ser Pro  Cys Gln Arg Ser His  Leu Ser Trp Arg Ala  Arg Ser Trp
    2675                2680                2685


Ala Ser  Ser Thr Ser Gly Gly  Ser Pro Glu Ser Phe  Met Thr Ser
    2690                2695                2700


Met Lys  Gly Thr Ser Cys Leu  Pro Lys Asp Pro Ile  Gln Val Val
    2705                2710                2715
```

```
Ser Thr  Ser Val Arg Lys Ser  Leu Ser Val Arg Gly  Cys Glu Pro
    2720                2725                2730

Met Gly  Lys Asn Trp Ile Ser  Cys His Gln Leu Glu  Glu Trp Leu
    2735                2740                2745

Leu Met  Trp Lys Lys Cys Arg  Arg Arg Ala Glu His  Ser Cys Leu
    2750                2755                2760

Cys Leu  Tyr Lys Arg Pro Gln  Cys Ser Gln Arg Cys  Thr Gly Cys
    2765                2770                2775

Thr Cys  Cys Thr Ser Cys Thr  Trp Val Pro Leu Ala  Arg Asn Phe
    2780                2785                2790

Ser Gly  Gln Trp Ser Ala Gly  Gly Cys Ile Ser Cys  Cys Thr Thr
    2795                2800                2805

Ser Trp  Pro Ser Ala Trp Pro  Ser Ser Ala Ser Met  Val Val Met
    2810                2815                2820

Leu Thr  Ser Pro Arg Gly Arg  Gln Val Gln Thr Ser  Ala Arg Thr
    2825                2830                2835

Gly Arg  Arg Ala Arg Thr Arg  Ala Arg Arg Pro Glu  Leu Ser Arg
    2840                2845                2850

Val Leu  Arg Arg Cys Gly Val  Arg Ser Val Gly Ser  Gly Gly Ala
    2855                2860                2865

Arg Leu  Thr Cys Arg Ser Phe  Ser Arg Ala Arg Gly  Arg Ser Arg
    2870                2875                2880

Trp Tyr  Leu Ile Ser Thr Ala  Pro Leu Val Ala Thr  Ser Thr Ala
    2885                2890                2895

Cys Arg  Val Pro Cys Pro Trp  Gly Ala Thr Thr Val  Pro Arg Phe
    2900                2905                2910
```

```
Phe Leu  Gly Ala Ala Ser Met  Ser Val Arg Ser Gly  Gly Glu Asp
    2915                2920                2925


Ala Arg  Arg Ala Ala Gly Ala  Ala Arg Gly Pro Glu  Ala Gly Ala
    2930                2935                2940


Ala Gly  Ala Arg Arg Arg Arg  Ala Arg Ala Gly Ser  Gly Thr Ala
    2945                2950                2955


Pro Gly  Glu Asp Trp Arg Glu  Arg Arg Arg Asp Gly  Arg Pro Gly
    2960                2965                2970


Ser Asp  Ala Ser Gly Arg Pro  Arg Asp Pro Val Thr  Lys Arg Val
    2975                2980                2985


Arg Gln  Asn Gln Ser Arg Tyr  Arg Arg Arg Pro Ala  Ala Gly Ser
    2990                2995                3000


Leu Ala  Arg Arg Pro Ser Cys  Pro Gly Arg Arg Ser  Arg Ser Thr
    3005                3010                3015


Ala Arg  Ser Pro Pro Pro Glu  Gly Leu Arg Gly Arg  Arg Ala Arg
    3020                3025                3030


Arg Trp  Pro Arg Gly Arg Trp  Arg Cys Gly Pro Ala  Ala Arg Arg
    3035                3040                3045


Arg Ser  Cys Arg Pro Arg Ser  Arg Arg Gly Cys Arg  Pro Arg Leu
    3050                3055                3060


Arg Arg  Gly Arg Ala Arg Ala  Pro Pro Gly Arg Gly  Ala Arg Arg
    3065                3070                3075


Gly Ala  Arg Pro Arg Ser Cys  Arg Gly Ala Gly Arg  Gly Ser Ala
    3080                3085                3090


Trp Trp  Arg Cys Ala Arg Arg  Arg Ser Thr Ser Ser  Gly Gly Ala
    3095                3100                3105
```

```
Ala Ser  Arg Arg Arg Pro Gly  Leu Pro Ser Val Pro  Trp Pro Arg
    3110                 3115                 3120


Arg Ser  Pro Arg Arg Ser Lys  Thr Gly Ser Cys Ala  Pro Arg Arg
    3125                 3130                 3135


Ser Thr  Pro Pro Pro Glu Asp  Gly Ala Arg Arg Trp  Trp Arg Ala
    3140                 3145                 3150


Pro Arg  Ala Arg Arg Pro Arg  Gly Ala Pro Leu Pro  Ser Pro Pro
    3155                 3160                 3165


Leu Pro  Pro Pro Leu Thr Ser  Leu Leu Leu Pro Pro  Gln Glu Ala
    3170                 3175                 3180


Val Ala  Gly Glu Gly Pro Cys  Val Ala Gly Gly Ala  Arg Ala Asp
    3185                 3190                 3195


Gly Arg  Ser Ala Arg Trp Ser  Pro Arg Ala Gly Asp  Ala Trp Ser
    3200                 3205                 3210


Arg Arg  Arg Ala Arg Pro Arg  Gly Ala Ala Ala Arg  Arg Arg Arg
    3215                 3220                 3225


Ala Ser  Pro Gly Gly Arg Arg  Gly Gly Leu Arg Trp  Ala Gly Arg
    3230                 3235                 3240


Gly Arg  Arg Cys Ile Leu Ser  Ile Asp Pro Gly Leu  Arg Ala Arg
    3245                 3250                 3255


Thr Ala  Ser Arg Asp Pro Arg  Asp Pro Lys Thr Ala  Glu Arg Arg
    3260                 3265                 3270


Leu Arg  Ala Ser Arg Ser Arg  Lys Val Gly Ala Arg  Phe Leu Val
    3275                 3280                 3285


Leu Arg  Val Phe Gly Arg Glu  Ala Gly Gly Arg Cys  Cys Trp Ser
    3290                 3295                 3300
```

```
Ser Arg  Arg Ser Asp Gly Gly  Trp Trp Arg Gly Ala  Pro Gly Pro
    3305                3310                3315

Trp Ala  Arg Leu Ala Gly Cys  Ala Asp Gly Arg Pro  Cys Pro Arg
    3320                3325                3330

Arg Gly  Pro Asp Thr Trp Arg  Gly Pro Cys Ser Ser  Pro Ala Ala
    3335                3340                3345

Ala Pro  Arg Ala Pro Pro Pro  Arg Pro Arg Gly Arg  Ala Cys Ala
    3350                3355                3360

Ala Arg  Thr Arg Ala Ala Ala  Gly Arg Ala Pro Gly  Arg Arg Arg
    3365                3370                3375

Arg Ala  Arg Gly Trp Pro Ala  Gly Ser Gly Gly Trp  Ser Gly Ser
    3380                3385                3390

Arg Arg  Ser Arg Arg Ser Gly  Gly Arg Leu Arg Cys  Trp Cys Arg
    3395                3400                3405

Ser Ser  Trp Pro Arg Thr Ser  Arg Ser Gly Gly Arg  Val Ala Arg
    3410                3415                3420

Ala Arg  Gly Thr Gly Ala Ser  Arg Arg Ala Cys Arg  Arg Cys Ser
    3425                3430                3435

Arg Cys  Arg Arg Ala Arg Gly  Thr Gly Ile Arg Arg  Gly Ser Ala
    3440                3445                3450

Ala Ala  Ala Gly Gly Arg Ala  Ala Ile Ala Arg Trp  Arg Gly Arg
    3455                3460                3465

Arg Ala  Arg Gly Pro Arg Ala  Gly Gly Gly Ser Arg  Arg Cys Thr
    3470                3475                3480

Trp Thr  Ser Arg Cys Arg Arg  Arg Trp Trp Arg Arg  Ala Gly Thr
    3485                3490                3495
```

```
Arg Gly  Arg Gly Ser Arg Cys  Cys Ala Ala Ala Gly  Ser Ser Ser
    3500                 3505                 3510


Trp Trp  Pro Arg Ser Gly Pro  Gly Ala Arg Ser Arg  Gly Cys Ser
    3515                 3520                 3525


Arg His  Thr Gly Lys Asn Glu  Ser Gly Gln Arg Leu  Asp Ser Val
    3530                 3535                 3540


Ala Trp  Arg Leu Ser Glu Arg  Val Gly Leu Arg Val  Tyr Pro Gly
    3545                 3550                 3555


Ser Asn  Leu Glu Ser Gly Trp  Ser Arg Ser Arg Gly  Thr Gly Thr
    3560                 3565                 3570


Pro Val  Ser Thr Gln Ala Cys  Arg Asn Leu Gln Asp  Thr Glu Ala
    3575                 3580                 3585


Gly Arg  Phe Leu Ala Leu Val  Ala Gly His Glu Lys  Leu Val Ser
    3590                 3595                 3600


Ala Glu  Ser Gly Arg Pro Arg  Trp Leu Ala Ala Val  Val Trp Arg
    3605                 3610                 3615


Lys Asn  Arg Gln Gly Cys Val  Ala Val Cys Pro Gly  Ser Ser Leu
    3620                 3625                 3630


Ser Ala  Arg Arg Arg Pro Asp  Ser Ala Ala Asn Val  Gly Val Ala
    3635                 3640                 3645


Ala Pro  Ser Phe Pro Arg Pro  Leu Ser Gln Pro Thr  Ser Pro Val
    3650                 3655                 3660


Thr Glu  Arg Ala Pro Leu Phe  Phe Ser Cys Val Phe  Ala Arg Cys
    3665                 3670                 3675


Ile Pro  Tyr Cys Gly Arg Cys  Ala Pro Thr Leu His  His Asn Arg
    3680                 3685                 3690
```

```
Pro Tyr  Arg Ser Ser Ser Asn  Ser Arg Arg Phe Cys  Pro Arg Pro
    3695                 3700                 3705

Ser Ser  Ser Gln Pro Leu Pro  Arg Arg Pro Pro Ala  Glu Pro Ala
    3710                 3715                 3720

Phe Ser  Met Thr Trp Pro Trp  Lys Arg Ala Arg Gly  Trp Arg Gly
    3725                 3730                 3735

Trp Gly  Arg Arg Arg Arg Ser  Gly Thr Arg Ala Cys  Arg Lys Gly
    3740                 3745                 3750

Thr Leu  Ala Arg Pro Thr Cys  Pro Ser Arg Thr Cys  Ser Glu Thr
    3755                 3760                 3765

Gly Ala  Ala Arg Ser Pro Arg  Arg Cys Ala Pro Pro  Ala Ser Thr
    3770                 3775                 3780

Arg Gly  Gly Ser Cys Gly Ala  Ala Trp Thr Glu Ser  Gly Cys Gly
    3785                 3790                 3795

Thr Arg  Ile Ser Arg Arg Thr  Ser Arg Gly Ser Ala  Pro Arg Ala
    3800                 3805                 3810

Arg Thr  Trp Pro Arg Pro Thr  Trp Ser Arg Arg Thr  Ser Arg Pro
    3815                 3820                 3825

Arg Arg  Arg Ala Thr Ser Lys  Asn Pro Ser Thr Thr  Thr Cys Ala
    3830                 3835                 3840

Arg Ser  Arg Ala Arg Arg Pro  Trp Ala Cys Thr Cys  Gly Thr Cys
    3845                 3850                 3855

Trp Arg  Pro Ser Cys Arg Thr  Pro Arg Ala Ser Arg  Arg Arg Ser
    3860                 3865                 3870

Cys Phe  Trp Trp Cys Ser Thr  Val Gly Thr Thr Arg  Arg Ser Gly
    3875                 3880                 3885
```

```
Arg Arg  Cys Ile Ser Pro Ser  Pro Arg Ala Ala Gly  Ser Trp Thr
    3890                 3895                 3900


Trp Thr  Phe Cys Arg Ala Ser  Trp Cys Arg Ser Ala  Gly Cys Arg
    3905                 3910                 3915


Cys Pro  Arg Ser Trp Arg Pro  Ser Thr Ser Arg Cys  Val Trp Ala
    3920                 3925                 3930


Ser Thr  Thr Leu Gly Arg Ser  Thr Arg Pro Arg Thr  Cys Pro Thr
    3935                 3940                 3945


Arg Arg  Arg Ser Thr Gly Phe  Thr Cys Ala Pro Lys  Cys Pro Ala
    3950                 3955                 3960


Thr Ile  Trp Gly Cys Thr Ala  Thr Thr Gly Cys Thr  Ala Arg Ala
    3965                 3970                 3975


Pro Ala  Ala Gly Ala Ser Ala  Thr Arg Ser Cys Thr  Ala Cys Ser
    3980                 3985                 3990


Gly Pro  Pro Gly Pro Gly Pro  Arg Gly Arg Ala Thr  Leu Thr Trp
    3995                 4000                 4005


Ala Arg  Thr Cys Ala Gly Ser  Pro Ala Ala Gly Pro  Trp Lys Leu
    4010                 4015                 4020


Pro Ala  Val Pro Pro Thr Trp  Arg Arg Trp Thr Met  Arg Arg Arg
    4025                 4030                 4035


Arg Ala  Ser Thr Trp Lys Thr  Asp Gly Ala Thr Val  Phe Leu Leu
    4040                 4045                 4050


Asp Ala  Ala Thr Ala Thr Ala  Ala Ala Ser Ser Arg  Asp Ala Gly
    4055                 4060                 4065


Gly Ala  Ala Glu Pro Ala Val  Arg His Leu Leu Gly  Arg Leu Asp
    4070                 4075                 4080
```

```
Pro Gly  His Ala Thr His His  Gly Ala Asp Asp Pro  Gln Ser Arg
    4085                4090                4095

Ser Leu  Thr Ala Ala Ser Gly  Gln Pro Ala Leu Gly  His Pro Gly
    4100                4105                4110

Gly Arg  Gly Ala Leu Ala Leu  Glu Pro His Ala Arg  Glu Gly Ala
    4115                4120                4125

Gly His  Arg Glu Arg Ala Gly  Gly Glu Gln Gly His  Pro Arg Arg
    4130                4135                4140

Gly Arg  Ala Gly Val Gln Arg  Ala Ala Gly Ala Arg  Gly Pro Leu
    4145                4150                4155

Gln Gln  His Gln Arg Ala Asp  Glu Pro Gly Pro His  Gly Asp Arg
    4160                4165                4170

Arg Ala  Arg Gly Gly Val Ala  Ala Arg Ala Val Pro  Pro Arg Val
    4175                4180                4185

Glu Pro  Gly Leu His Gly Gly  Ala Glu Arg Leu Pro  Glu His Ala
    4190                4195                4200

Ala Arg  Gln Arg Ala Pro Gly  Pro Gly Gly Leu His  Gln Leu His
    4205                4210                4215

Gln Arg  Ala Ala Ala Asp Gly  Gly Arg Gly Ala Pro  Glu Arg Gly
    4220                4225                4230

Val Pro  Val Gly Ala Gly Leu  Leu Leu Pro Asp Gln  Ser Pro Gly
    4235                4240                4245

Leu Ala  Asp Arg Glu Pro Glu  Pro Gly Phe Gln Glu  Leu Ala Gly
    4250                4255                4260

Thr Val  Gly Arg Ala Gly Pro  Gly Arg Gly Pro Arg  Asp Gly Val
    4265                4270                4275
```

```
Glu Pro  Ala Asp Ala Glu Leu  Ala Pro Ala Ala Ala  Ala Gly Gly
    4280                4285                4290


Ala Leu  His Gly Gln Arg Gln  Arg Glu Pro Arg Leu  Val Pro Gly
    4295                4300                4305


Leu Pro  Ala Pro Val Pro Arg  Gly His Arg Thr Gly  Ala Arg Gly
    4310                4315                4320


Arg Ala  Asp Leu Pro Gly Asp  His Pro Arg Glu Pro  Arg Ala Gly
    4325                4330                4335


Pro Gly  Gly Pro Gly Gln Pro  Gly Gly His Pro Glu  Leu Pro Ala
    4340                4345                4350


Asp Gln  Pro Val Ala Glu Asp  Pro Ala Pro Val Arg  Ala Glu His
    4355                4360                4365


Arg Gly  Gly Ala His Pro Ala  Leu Arg Ala Ala Glu  Arg Gly Ala
    4370                4375                4380


Val Pro  Asp Ala Gly Gly Gly  His Ala Gln Arg Gly  Ala Arg His
    4385                4390                4395


Asp Arg  Ala Gln His Gly Ala  Gln His Val Arg Pro  Gln Pro Pro
    4400                4405                4410


Val His  Gln Ala Asp Gly Leu  Leu Ala Ser Gly Gly  Arg His Glu
    4415                4420                4425


Leu Gly  Leu Leu Tyr Gln Arg  His Leu Glu Pro Ala  Leu Ala Pro
    4430                4435                4440


Ala Ala  Arg Val Leu His Gly  Arg Val Arg His Ala  Arg Pro Gln
    4445                4450                4455


Arg Arg  Val Pro Val Gly Arg  Arg Gly Gln Gln Arg  Val Leu Ala
    4460                4465                4470
```

```
Ala Ser  Arg Asn Gln Cys Arg  Val Glu Glu Arg Gly  Arg Gly Pro
    4475                4480                4485


Ala Ala  Val Leu Gly Ala Val  Arg Ser Arg Gly Cys  Cys Arg Gly
    4490                4495                4500


Gly Ala  Arg Gly Arg Gln Pro  Leu Pro Glu Pro Ala  Leu Phe Ala
    4505                4510                4515


Glu Gln  Arg Ala Gln Gln Arg  Ala Gly Ser Ala Asp  Ala Thr Ala
    4520                4525                4530


Pro Ala  Gly Arg Gly Gly Val  Pro Glu Arg Leu Leu  Val Glu Ala
    4535                4540                4545


Arg Ala  Arg Glu Glu Leu Pro  Gln Arg Asp Arg Glu  Pro Gly Gly
    4550                4555                4560


Gln Asp  Glu Pro Leu Glu Asp  Val Arg Ala Arg Ala  Gln Gly Arg
    4565                4570                4575


Ala Pro  Ser Gln Arg Arg His  Pro Thr Pro Ala Ala  Arg Gln Ala
    4580                4585                4590


Ala Gly  Thr Gly Val Gly Arg  Gly Phe Arg Arg Arg  Gln Gln Arg
    4595                4600                4605


Val Gly  Leu Gly Trp Glu Trp  Trp Pro Val Arg Ser  Pro Ala Pro
    4610                4615                4620


Pro Tyr  Arg Ala Pro Asp Val  Arg Ile Lys Asn Lys  Arg Arg Tyr
    4625                4630                4635


Ser Pro  Arg Pro Trp Arg Pro  Ala Cys Val Leu Leu  Cys Cys Leu
    4640                4645                4650


Tyr Asp  Glu Ala Arg Val Pro  Gly Gly Ser Ser Ser  Leu Val Arg
    4655                4660                4665
```

```
Glu Arg  Asp Ala Ala Gly Gly  Gly Gly Gly Asp Ala  Ala Pro Ala
    4670                4675                4680


Gly Gly  Ala Leu Arg Ala Pro  Ala Val Pro Gly Ala  Tyr Gly Gly
    4685                4690                4695


Ala Glu  Gln His Ser Leu Leu  Gly Ala Gly Thr Leu  Val Arg Tyr
    4700                4705                4710


His Pro  Val Val Pro Gly Gly  Gln Gln Val Gly Arg  His Arg Leu
    4715                4720                4725


Ala Glu  Leu Pro Glu Arg Pro  Gln Gln Leu Pro Asp  His Arg Gly
    4730                4735                4740


Ala Glu  Gln Arg Phe His Pro  His Gly Gly Gln His  Pro Asp His
    4745                4750                4755


Gln Leu  Arg Ala Leu Ala Val  Gly Arg Pro Ala Glu  Asn His His
    4760                4765                4770


Ala His  Gln His Ala Gln Arg  Glu Arg Val His Val  Gln Gln Gln
    4775                4780                4785


Val Gln  Gly Ala Gly Asp Gly  Leu Ala Gln Asp Pro  Gln Arg Gly
    4790                4795                4800


Gly Leu  Trp Ser Gly Arg Ala  Asp Leu Arg Val Gly  Gly Val Ala
    4805                4810                4815


Ala Arg  Gly Gln Leu Leu Gly  Asp His Asp His Arg  Ser Asp Glu
    4820                4825                4830


Gln Arg  His His Arg Gln Leu  Leu Gly Gly Gly Ala  Ala Glu Arg
    4835                4840                4845


Gly Ala  Gly Glu Arg His Arg  Arg Glu Val Arg His  Ala Gln Leu
    4850                4855                4860
```

```
Pro Ala  Gly Leu Gly Pro Arg  Asp Arg Ala Gly Asp  Ala Gly Arg
    4865                4870                4875


Val His  Gln Arg Gly Leu Pro  Pro Arg His Arg Pro  Ala Ala Arg
    4880                4885                4890


Leu Arg  Arg Gly Leu His Arg  Glu Pro Pro Gln Gln  Pro Ala Gly
    4895                4900                4905


His Pro  Gln Ala Ala Ala Leu  Pro Gly Gly Leu Pro  Asp Pro Val
    4910                4915                4920


Arg Gly  Pro Gly Gly Gly Gln  His Pro Arg Ala Leu  Gly Cys Arg
    4925                4930                4935


Ser Leu  Arg Glu Lys Gln Gly  Gly His Arg Arg Gly  Asp Arg Ser
    4940                4945                4950


Arg Gly  His Arg Leu Tyr Arg  Gly Ala Gly Arg Phe  Cys Arg Cys
    4955                4960                4965


Gly Ser  Gly Arg Gly Gly Asn  Arg Lys Asp Ser His  Pro Ala Gly
    4970                4975                4980


Gly Glu  Gly Gln Gln Gly Gln  Glu Leu Gln Arg Ala  Arg Gly Gln
    4985                4990                4995


Glu Lys  His Arg Leu Pro Gln  Leu Val Pro Gly Leu  Gln Leu Arg
    5000                5005                5010


Arg Pro  Arg Glu Gly Arg Ala  Leu Leu Asp Ala Ala  His His Leu
    5015                5020                5025


Gly Arg  His Leu Arg Arg Gly  Ala Ser Leu Leu Val  Ala Ala Arg
    5030                5035                5040


His Asp  Ala Arg Pro Gly His  Leu Pro Leu His Ala  Ser Ser Gln
    5045                5050                5055
```

```
Leu Pro  Gly Gly Gly Arg Arg  Ala Pro Ala Arg Leu  Leu Gln Glu
    5060                5065                5070

Leu Leu  Gln Arg Ala Gly Arg  Leu Leu Ala Ala Ala  Ala Arg Leu
    5075                5080                5085

His Leu  Ala His Ala Arg Leu  Gln Pro Leu Pro Arg  Glu Pro Asp
    5090                5095                5100

Pro Arg  Pro Pro Ala Arg Ala  His His Tyr His Arg  Gln Lys Arg
    5105                5110                5115

Ser Cys  Ser His Arg Ser Arg  Asp Pro Ala Ala Ala  Gln Gln Tyr
    5120                5125                5130

Pro Gly  Ser Pro Ala Arg Asp  Arg His Arg Gln Thr  Pro His Leu
    5135                5140                5145

Pro Leu  Arg Leu Gln Gly Pro  Gly Arg Ser Arg Ala  Ala Arg Pro
    5150                5155                5160

Leu Glu  Pro His Leu Leu Lys  Asn Val His Ser His  Leu Ala Gln
    5165                5170                5175

His Arg  Leu Gly Pro Ala Arg  Ala Gln Gln Asp Val  Arg Arg Arg
    5180                5185                5190

Ser Pro  Thr Leu His Ala Thr  Pro Arg Ala Arg Ala  Arg Ala Leu
    5195                5200                5205

Pro Arg  Ser Leu Gly Arg Pro  Gln Gly Pro Arg Ala  Leu Ala His
    5210                5215                5220

His Arg  Arg Arg Arg Asp Arg  Pro Gly Gly Gly Arg  Arg Ala Gln
    5225                5230                5235

Leu His  Ala Arg Arg Arg Ala  Arg Leu His Arg Gly  Arg Arg His
    5240                5245                5250
```

```
Arg Gln  Arg Gly Gly Arg Arg  Ala Pro Val Arg Pro  His Gln Glu
    5255                 5260                 5265


Pro Ala  Ala Ala His Arg Pro  Ala Ala Pro Glu His  Pro Arg His
    5270                 5275                 5280


Ala Arg  Gly Ala Ser Leu Ala  Ala Gln Gly Gln Ala  His Gly Thr
    5285                 5290                 5295


Gln Gly  His Ala Gln Gly Gly  Gln Thr Arg Gly Leu  Arg Gln Gln
    5300                 5305                 5310


Gln Arg  Arg Gln Asp Pro Gln  Thr Arg Gly His Gly  Gly Gly Gly
    5315                 5320                 5325


Gly His  Arg Gln His Val Pro  Pro Ala Ala Arg Gln  Arg Val Leu
    5330                 5335                 5340


Gly Ala  Arg Arg Arg His Arg  Cys Ala Arg Ala Arg  Ala His Pro
    5345                 5350                 5355


Pro Pro  Ser His Leu Lys Met  Leu Thr Ser Arg Cys  Cys Val Pro
    5360                 5365                 5370


Ala Ala  Arg Arg Met Ser Lys  Arg Lys Tyr Lys Glu  Glu Met Leu
    5375                 5380                 5385


Gln Val  Ile Ala Pro Glu Ile  Tyr Gly Pro Ala Ala  Ala Val Lys
    5390                 5395                 5400


Glu Glu  Arg Lys Pro Arg Lys  Leu Lys Arg Val Lys  Lys Asp Lys
    5405                 5410                 5415


Lys Glu  Glu Glu Asp Asp Gly  Leu Val Glu Phe Val  Arg Glu Phe
    5420                 5425                 5430


Ala Pro  Arg Arg Arg Val Gln  Trp Arg Gly Arg Lys  Val Lys Pro
    5435                 5440                 5445
```

```
Val Leu  Arg Pro Gly Thr Thr  Val Val Phe Thr Pro  Gly Glu Arg
    5450                5455                5460


Ser Gly  Ser Ala Ser Lys Arg  Ser Tyr Asp Glu Val  Tyr Gly Asp
    5465                5470                5475


Glu Asp  Ile Leu Glu Gln Ala  Val Glu Arg Leu Gly  Glu Phe Ala
    5480                5485                5490


Tyr Gly  Lys Arg Ser Arg Pro  Ala Pro Leu Lys Glu  Glu Ala Val
    5495                5500                5505


Ser Ile  Pro Leu Asp His Gly  Asn Pro Thr Pro Ser  Leu Lys Pro
    5510                5515                5520


Val Thr  Leu Gln Gln Val Leu  Pro Ser Ala Ala Pro  Arg Arg Gly
    5525                5530                5535


Phe Lys  Arg Glu Gly Gly Glu  Asp Leu Tyr Pro Thr  Met Gln Leu
    5540                5545                5550


Met Val  Pro Lys Arg Gln Lys  Leu Glu Asp Val Leu  Glu His Met
    5555                5560                5565


Lys Val  Asp Pro Glu Val Gln  Pro Glu Val Lys Val  Arg Pro Ile
    5570                5575                5580


Lys Gln  Val Ala Pro Gly Leu  Gly Val Gln Thr Val  Asp Ile Lys
    5585                5590                5595


Ile Pro  Thr Glu Pro Met Glu  Thr Gln Thr Glu Pro  Val Lys Pro
    5600                5605                5610


Ser Thr  Ser Thr Met Glu Val  Gln Thr Asp Pro Trp  Met Pro Ala
    5615                5620                5625


Pro Ala  Ser Thr Ser Thr Arg  Arg Arg Arg Lys Tyr  Gly Ala Ala
    5630                5635                5640
```

```
Ser Leu  Leu Met Pro Asn Tyr  Ala Leu His Pro Ser  Ile Ile Pro
    5645                5650                5655

Thr Pro  Gly Tyr Arg Gly Thr  Arg Phe Tyr Arg Gly  Tyr Thr Ser
    5660                5665                5670

Ser Arg  Arg Arg Lys Thr Thr  Thr Arg Arg Arg Arg  Arg Ser Arg
    5675                5680                5685

Arg Ser  Ser Thr Ala Thr Ser  Ala Leu Val Arg Arg  Val Tyr Arg
    5690                5695                5700

Ser Gly  Arg Glu Pro Leu Thr  Leu Pro Arg Ala Arg  Tyr His Pro
    5705                5710                5715

Ser Ile  Ala Ile Leu Pro Pro  Pro Thr Cys Arg Tyr  Gly Pro His
    5720                5725                5730

Met Pro  Pro Pro Arg Pro His  Tyr Gly Leu Pro Arg  Lys Lys Ala
    5735                5740                5745

Ala Pro  Lys Ala Asp Gly Glu  Arg Ala Ala Ser Pro  Ser Pro Pro
    5750                5755                5760

Ala Ala  Ala Arg His Gln Gln  Ala Val Gly Gly Arg  Leu Pro Ala
    5765                5770                5775

Arg Ala  Asp Pro His His Arg  Arg Gly Asp Arg Gly  Asp Pro Arg
    5780                5785                5790

His Ser  Phe Arg Gly Gly Ala  Gly Leu Ser Ala Pro  Leu Arg His
    5795                5800                5805

Lys Lys  Ala Trp Ile Cys Asn  Lys Lys Lys Asn Gly  Leu Thr Leu
    5810                5815                5820

Leu Val  Leu Cys Val Phe Leu  Asp Gly Arg His Gln  Phe Phe Val
    5825                5830                5835
```

```
Pro Gly  Thr Ala Thr Arg His  Ala Ala Val Tyr Gly  His Leu Glu
    5840                5845                5850

Arg His  Arg Gln Gln Pro Thr  Glu Arg Gly Arg Leu  Gln Leu Glu
    5855                5860                5865

Gln Ser  Leu Glu Arg Ala Glu  Phe Arg Val His Ala  Gln Asn Leu
    5870                5875                5880

Trp Gln  Gln Gly Val Glu Gln  Gln His Arg Ala Gly  Ala Glu Gly
    5885                5890                5895

Lys Ala  Glu Arg Thr Glu Leu  Pro Ala Glu Gly Gly  Trp Pro Gly
    5900                5905                5910

Leu Arg  His Gln Arg Gly Gly  Pro Gly Gln Pro Gly  Arg Ala Glu
    5915                5920                5925

Thr Asp  Gln Gln Pro Pro Gly  Arg Gly Pro Ala Arg  Gly Val Arg
    5930                5935                5940

Gly Asp  Ala Pro Gly Gly Gly  Gly Ala Ala Ser Pro  Gly Gln Ala
    5945                5950                5955

Arg Arg  Gln Ala Thr Ala Ser  Arg Arg Gly Gly Asp  Ala Ala Asp
    5960                5965                5970

Ala His  Gly Arg Ala Ala Pro  Val Arg Gly Gly Gly  Glu Thr Gly
    5975                5980                5985

Pro Ala  His His Ala Ala Arg  Gly Ala Ser Gly His  Arg Ser Ala
    5990                5995                6000

Glu Thr  Gln Gln Gln Pro Ala  Arg Asp Pro Gly Leu  Ala Ser Ala
    6005                6010                6015

Ser Pro  Leu His Ser Gly Ala  Pro Ala Ala Gly Gly  Arg Arg Val
    6020                6025                6030
```

```
Ala Arg  Pro Pro Arg Pro Pro  Pro Gly Glu Leu Ala  Glu His Ser
    6035                6040                6045

Glu Gln  His Arg Gly Ser Gly  Ser Ala Glu Cys Glu  Ala Pro Pro
    6050                6055                6060

Leu Leu  Leu Lys Asp Thr Val  Ala Leu Asn Leu Leu  Val Cys Val
    6065                6070                6075

Tyr Met  Tyr Val Arg Arg Pro  Glu Gly Gly Val Arg  Gly Ala Ser
    6080                6085                6090

Pro Ser  Cys Lys Met Ala Thr  Pro Ser Met Leu Pro  Gln Trp Ala
    6095                6100                6105

Tyr Met  His Ile Ala Gly Gln  Asp Ala Ser Glu Tyr  Leu Ser Pro
    6110                6115                6120

Gly Leu  Val Gln Phe Ala Arg  Ala Thr Asp Thr Tyr  Phe Ser Leu
    6125                6130                6135

Gly Asn  Lys Phe Arg Asn Pro  Thr Val Ala Pro Thr  His Asp Val
    6140                6145                6150

Thr Thr  Asp Arg Ser Gln Arg  Leu Thr Leu Arg Phe  Val Pro Val
    6155                6160                6165

Asp Arg  Glu Asp Asn Thr Tyr  Ser Tyr Lys Val Arg  Tyr Thr Leu
    6170                6175                6180

Ala Val  Gly Asp Asn Arg Val  Leu Asp Met Ala Ser  Thr Tyr Phe
    6185                6190                6195

Asp Ile  Arg Gly Val Leu Asp  Arg Gly Pro Ser Phe  Lys Pro Tyr
    6200                6205                6210

Ser Gly  Thr Ala Tyr Asn Ser  Leu Ala Pro Lys Gly  Ala Pro Asn
    6215                6220                6225
```

```
Ser Ser  Gln Trp Glu Gln Ala  Lys Thr Gly Asn Gly  Gly Thr Met
    6230                6235                6240

Glu Thr  His Thr Tyr Gly Val  Ala Pro Met Gly Gly  Glu Asn Ile
    6245                6250                6255

Thr Lys  Asp Gly Leu Gln Ile  Gly Thr Asp Val Thr  Ala Asn Gln
    6260                6265                6270

Asn Lys  Pro Ile Tyr Ala Asp  Lys Thr Phe Gln Pro  Glu Pro Gln
    6275                6280                6285

Val Gly  Glu Glu Asn Trp Gln  Glu Thr Glu Asn Phe  Tyr Gly Gly
    6290                6295                6300

Arg Ala  Leu Lys Lys Asp Thr  Asn Met Lys Pro Cys  Tyr Gly Ser
    6305                6310                6315

Tyr Ala  Arg Pro Thr Asn Glu  Lys Gly Gly Gln Ala  Lys Leu Lys
    6320                6325                6330

Val Gly  Asp Asp Gly Val Pro  Thr Lys Glu Phe Asp  Ile Asp Leu
    6335                6340                6345

Ala Phe  Phe Asp Thr Pro Gly  Gly Thr Val Asn Gly  Gln Asp Glu
    6350                6355                6360

Tyr Lys  Ala Asp Ile Val Met  Tyr Thr Glu Asn Thr  Tyr Leu Glu
    6365                6370                6375

Thr Pro  Asp Thr His Val Val  Tyr Lys Pro Gly Lys  Asp Asp Ala
    6380                6385                6390

Ser Ser  Glu Ile Asn Leu Val  Gln Gln Ser Met Pro  Asn Arg Pro
    6395                6400                6405

Asn Tyr  Ile Gly Phe Arg Asp  Asn Phe Ile Gly Leu  Met Tyr Tyr
    6410                6415                6420
```

```
Asn Ser  Thr Gly Asn Met Gly  Val Leu Ala Gly Gln  Ala Ser Gln
    6425                6430                6435

Leu Asn  Ala Val Val Asp Leu  Gln Asp Arg Asn Thr  Glu Leu Ser
    6440                6445                6450

Tyr Gln  Leu Leu Leu Asp Ser  Leu Gly Asp Arg Thr  Arg Tyr Phe
    6455                6460                6465

Ser Met  Trp Asn Gln Ala Val  Asp Ser Tyr Asp Pro  Asp Val Arg
    6470                6475                6480

Ile Ile  Glu Asn His Gly Val  Glu Asp Glu Leu Pro  Asn Tyr Cys
    6485                6490                6495

Phe Pro  Leu Asp Gly Ser Gly  Thr Asn Ala Ala Tyr  Gln Gly Val
    6500                6505                6510

Lys Val  Lys Asp Gly Gln Asp  Gly Asp Val Glu Ser  Glu Trp Glu
    6515                6520                6525

Asn Asp  Asp Thr Val Ala Ala  Arg Asn Gln Leu Cys  Lys Gly Asn
    6530                6535                6540

Ile Phe  Ala Met Glu Ile Asn  Leu Gln Ala Asn Leu  Trp Arg Ser
    6545                6550                6555

Phe Leu  Tyr Ser Asn Val Ala  Leu Tyr Leu Pro Asp  Ser Tyr Lys
    6560                6565                6570

Tyr Thr  Pro Thr Asn Val Thr  Leu Pro Thr Asn Thr  Asn Thr Tyr
    6575                6580                6585

Asp Tyr  Met Asn Gly Arg Val  Thr Pro Pro Ser Leu  Val Asp Ala
    6590                6595                6600

Tyr Leu  Asn Ile Gly Ala Arg  Trp Ser Leu Asp Pro  Met Asp Asn
    6605                6610                6615
```

```
Val Asn  Pro Phe Asn His His  Arg Asn Ala Gly Leu  Arg Tyr Arg
    6620                 6625                 6630

Ser Met  Leu Leu Gly Asn Gly  Arg Tyr Val Pro Phe  His Ile Gln
    6635                 6640                 6645

Val Pro  Gln Lys Phe Phe Ala  Ile Lys Ser Leu Leu  Leu Leu Pro
    6650                 6655                 6660

Gly Ser  Tyr Thr Tyr Glu Trp  Asn Phe Arg Lys Asp  Val Asn Met
    6665                 6670                 6675

Ile Leu  Gln Ser Ser Leu Gly  Asn Asp Leu Arg Thr  Asp Gly Ala
    6680                 6685                 6690

Ser Ile  Ala Phe Thr Ser Ile  Asn Leu Tyr Ala Thr  Phe Phe Pro
    6695                 6700                 6705

Met Ala  His Asn Thr Ala Ser  Thr Leu Glu Ala Met  Leu Arg Asn
    6710                 6715                 6720

Asp Thr  Asn Asp Gln Ser Phe  Asn Asp Tyr Leu Ser  Ala Ala Asn
    6725                 6730                 6735

Met Leu  Tyr Pro Ile Pro Ala  Asn Ala Thr Asn Val  Pro Ile Ser
    6740                 6745                 6750

Ile Pro  Ser Arg Asn Trp Ala  Ala Phe Arg Gly Trp  Ser Phe Thr
    6755                 6760                 6765

Arg Leu  Lys Thr Arg Glu Thr  Pro Ser Leu Gly Ser  Gly Phe Asp
    6770                 6775                 6780

Pro Tyr  Phe Val Tyr Ser Gly  Ser Ile Pro Tyr Leu  Asp Gly Thr
    6785                 6790                 6795

Phe Tyr  Leu Asn His Thr Phe  Lys Lys Val Ser Ile  Thr Phe Asp
    6800                 6805                 6810
```

```
Ser Ser  Val Ser Trp Pro Gly  Asn Asp Arg Leu Leu  Thr Pro Asn
    6815                6820                6825

Glu Phe  Glu Ile Lys Arg Thr  Val Asp Gly Glu Gly  Tyr Asn Val
    6830                6835                6840

Ala Gln  Cys Asn Met Thr Lys  Asp Trp Phe Leu Val  Gln Met Leu
    6845                6850                6855

Ala His  Tyr Asn Ile Gly Tyr  Gln Gly Phe Tyr Val  Pro Glu Gly
    6860                6865                6870

Tyr Lys  Asp Arg Met Tyr Ser  Phe Phe Arg Asn Phe  Gln Pro Met
    6875                6880                6885

Ser Arg  Gln Val Val Asp Glu  Val Asn Tyr Lys Asp  Tyr Gln Ala
    6890                6895                6900

Val Thr  Leu Ala Tyr Gln His  Asn Asn Ser Gly Phe  Val Gly Tyr
    6905                6910                6915

Leu Ala  Pro Thr Met Arg Gln  Gly Gln Pro Tyr Pro  Ala Asn Tyr
    6920                6925                6930

Pro Tyr  Pro Leu Ile Gly Lys  Ser Ala Val Ala Ser  Val Thr Gln
    6935                6940                6945

Lys Lys  Phe Leu Cys Asp Arg  Val Met Trp Arg Ile  Pro Phe Ser
    6950                6955                6960

Ser Asn  Phe Met Ser Met Gly  Ala Leu Thr Asp Leu  Gly Gln Asn
    6965                6970                6975

Met Leu  Tyr Ala Asn Ser Ala  His Ala Leu Asp Met  Asn Phe Glu
    6980                6985                6990

Val Asp  Pro Met Asp Glu Ser  Thr Leu Leu Tyr Val  Val Phe Glu
    6995                7000                7005
```

```
Val Phe  Asp Val Val Arg Val  His Gln Pro His Arg  Gly Val Ile
    7010                7015                7020

Glu Ala  Val Tyr Leu Arg Thr  Pro Phe Ser Ala Gly  Asn Ala Thr
    7025                7030                7035

Thr Ala  Ala Leu Ala Ser Cys  Lys Met Thr Ala Gly  Ser Gly Glu
    7040                7045                7050

Gln Glu  Leu Arg Ala Ile Leu  Arg Asp Leu Gly Cys  Gly Pro Cys
    7055                7060                7065

Phe Leu  Gly Thr Phe Asp Lys  Arg Phe Pro Gly Phe  Met Ala Pro
    7070                7075                7080

His Lys  Leu Ala Cys Ala Ile  Val Asn Thr Ala Gly  Arg Glu Thr
    7085                7090                7095

Gly Gly  Glu His Trp Leu Ala  Phe Ala Trp Asn Pro  Arg Ser His
    7100                7105                7110

Thr Cys  Tyr Leu Phe Asp Pro  Phe Gly Phe Ser Asp  Glu Arg Leu
    7115                7120                7125

Lys Gln  Ile Tyr Gln Phe Glu  Tyr Glu Gly Leu Leu  Arg Arg Ser
    7130                7135                7140

Ala Leu  Ala Thr Glu Asp Arg  Cys Val Thr Leu Glu  Lys Ser Thr
    7145                7150                7155

Gln Thr  Val Gln Gly Pro Arg  Ser Ala Ala Cys Gly  Leu Phe Cys
    7160                7165                7170

Cys Met  Phe Leu His Ala Phe  Val His Trp Pro Asp  Arg Pro Met
    7175                7180                7185

Asp Lys  Asn Pro Thr Met Asn  Leu Leu Thr Gly Val  Pro Asn Gly
    7190                7195                7200
```

```
Met Leu  Gln Ser Pro Gln Val  Glu Pro Thr Leu Arg  Arg Asn Gln
    7205                 7210                 7215


Glu Ala  Leu Tyr Arg Phe Leu  Asn Ala His Ser Ala  Tyr Phe Arg
    7220                 7225                 7230


Ser His  Arg Ala Arg Ile Glu  Lys Ala Thr Ala Phe  Asp Arg Met
    7235                 7240                 7245


Asn Gln  Asp Met Lys Thr Gly  Val Cys Met Met Leu  Tyr Ser Thr
    7250                 7255                 7260


Ala His  Val Tyr Ala Thr Phe  Ser Glu Ala Leu Thr  Leu Phe Arg
    7265                 7270                 7275


Asn Arg  Arg Gly Ser Ala Gly  Ser Arg His Gly Pro  Arg Ala Gly
    7280                 7285                 7290


Ile Arg  Cys Gly Thr Gly Thr  Trp Ala Ala Thr Thr  Arg Gly Ser
    7295                 7300                 7305


Ala Ala  Trp Ala Arg Gly Gly  Arg Gly Thr Ser Arg  Ser Thr Ala
    7310                 7315                 7320


Cys Ala  Val Ala Gly Arg Pro  Ala Gly Arg Ala Arg  Arg Ser Asn
    7325                 7330                 7335


Arg Ser  Trp Asp Pro Arg Ser  Ala Arg Glu Ser Cys  Gly Thr Arg
    7340                 7345                 7350


Gly Cys  Ser Thr Gly Thr Pro  Ser Gly Pro Gly Ala  Ser Arg Leu
    7355                 7360                 7365


Pro Ala  Pro Ser Arg Arg Cys  Pro Pro Arg Pro Asp  Pro Arg Arg
    7370                 7375                 7380


Trp Pro  Ser Arg Arg Gly Ser  Ser Cys Arg Ser Ala  Ala Pro Cys
    7385                 7390                 7395
```

```
Trp Ala  Arg Ser Arg Ala Cys  Gly Cys Asn Arg Ser  Ala Gly Gly
    7400                7405                7410


Ser Ala  Ser Ser Gly Pro Ala  Arg Ser Ser Cys Pro  Gly Thr Trp
    7415                7420                7425


Pro Ser  Lys Pro Pro Ala Gly  Gly Arg Pro Ala Ala  Pro Cys Arg
    7430                7435                7440


Pro Arg  Arg Arg Pro Arg Arg  Thr Cys Arg Thr Gly  Trp Trp Arg
    7445                7450                7455


Ser Arg  Arg Arg Ala Arg Ser  Ser Ala Arg Arg Cys  Trp Pro Ala
    7460                7465                7470


Ala Pro  Arg Cys Ala Pro Ser  Gly Ser Gly Ser Trp  Pro Gly Trp
    7475                7480                7485


Gly Ser  Pro Ser Ala Arg Ala  Ala Arg Ser Arg Ser  Pro His Pro
    7490                7495                7500


Ser Arg  Cys Ala Pro Ser Gly  Ser Ser Arg Ser Arg  Ala Gly Thr
    7505                7510                7515


Ala Ala  Cys Pro Arg Leu Arg  Cys Ser Arg Ala Ala  Thr Ala Arg
    7520                7525                7530


Ser Arg  Cys Thr Pro Ser Ser  Cys Gly Arg Ser Gly  Ser Ala Ser
    7535                7540                7545


Ala Arg  Ser Pro Ala Gly Ser  Gly Pro Ser Ser Arg  Ser Gly Ser
    7550                7555                7560


Cys Cys  Trp Arg Ser Ala Gly  Cys Arg Gly Ala Pro  Arg Ser His
    7565                7570                7575


Thr Gly  Gly Arg Cys Gly Gly  Thr Pro Arg Pro Ala  Arg Ala Ser
    7580                7585                7590
```

```
Ala Gly  Arg Arg Thr Ser Gly  Arg Ser Pro Arg Gly  Thr Gly Pro
    7595                 7600                 7605


Ser Ala  Ala Ser Ser Leu Pro  Cys Pro Ser Pro Arg  Pro Lys Arg
    7610                 7615                 7620


Ser Ala  Gly Ser Gly Gly Ser  Ser Pro Pro Leu Ser  Ser Ser Pro
    7625                 7630                 7635


Pro Pro  Arg Ser Gly Gly Arg  Ser Arg Pro Gly Ser  Gln Thr Leu
    7640                 7645                 7650


Ala Cys  Arg Pro Ser Arg Cys  Ala Arg Gly Glu Ser  Ser Pro Arg
    7655                 7660                 7665


Pro Pro  Ala Pro Pro Arg Pro  Ala Phe Arg Pro Arg  Cys Pro Gly
    7670                 7675                 7680


Cys Leu  Ala Lys Ala His Ala  Trp Ser Cys Gly Val  Ser Phe Trp
    7685                 7690                 7695


Ala Ala  Glu Ala Ala Ala Met  Cys Trp Glu Ser Ala  Ser Ser Arg
    7700                 7705                 7710


Ser Pro  Arg Leu Phe Leu Leu  Leu Gly Arg Arg Pro  Arg Pro Arg
    7715                 7720                 7725


Gly Gly  Arg His Ala Ser Ser  Gly Ala Glu Ala Glu  Ala Thr Gly
    7730                 7735                 7740


Ser Arg  Gly Ser Ala Gly Gly  Trp Gln Ser Pro Phe  Arg Val Arg
    7745                 7750                 7755


Gly Cys  Ala Pro Gly Gly Ala  Ala Leu Thr Asp Phe  Leu Arg Gly
    7760                 7765                 7770


Arg Pro  Leu Cys Ser Pro Arg  Glu Gln Gln Gln Ala  Trp Arg Leu
    7775                 7780                 7785
```

```
Ser His  Arg Arg Gln His Arg  His Leu Pro Pro Pro  Pro Pro Pro
    7790                 7795                 7800

Thr Arg  Thr Ser Ser Arg Met  Lys Ala Pro Pro Arg  Arg Pro Ala
    7805                 7810                 7815

Pro Pro  Pro Thr Pro Arg Pro  Gln Thr Cys Lys Arg  Trp Arg Asn
    7820                 7825                 7830

Pro Ser  Arg Leu Thr Trp Ala  Thr Arg Pro Arg Ser  Thr Arg Arg
    7835                 7840                 7845

Ser Trp  Gln Arg Ala Phe Gln  Pro Arg Lys Arg Thr  Thr Lys Ser
    7850                 7855                 7860

Ser Gln  Ser Arg Lys Gln Arg  Thr Ser Arg Thr Arg  Leu Gly Thr
    7865                 7870                 7875

Ser Met  Ala Thr Thr Ala Gly  Gln Arg Thr Cys Ser  Ser Ser Ile
    7880                 7885                 7890

Trp Pro  Ala Asn Ala Ser Ser  Ser Arg Thr Arg Cys  Ser Thr Ala
    7895                 7900                 7905

Pro Arg  Cys Pro Ser Ala Trp  Arg Ser Ser Ala Ala  Pro Thr Ser
    7910                 7915                 7920

Ala Thr  Ser Ser Arg Arg Ala  Cys Pro Pro Ser Ala  Ser Pro Thr
    7925                 7930                 7935

Ala Pro  Val Ser Pro Thr Arg  Ala Ser Thr Ser Thr  Arg Ser Ser
    7940                 7945                 7950

Arg Cys  Pro Arg Pro Trp Pro  Pro Thr Thr Ser Phe  Ser Arg Thr
    7955                 7960                 7965

Lys Gly  Ser Pro Ser Pro Ala  Ala Pro Thr Ala Pro  Ala Pro Thr
    7970                 7975                 7980
```

```
Pro Cys  Ser Thr Trp Ala Pro  Ala Pro Ala Tyr Leu  Ile Ser Pro
    7985                 7990                 7995


Pro Trp  Lys Arg Phe Pro Arg  Ser Ser Arg Val Trp  Ala Ala Thr
    8000                 8005                 8010


Arg Leu  Gly Pro Arg Thr Leu  Cys Lys Glu Ala Glu  Arg Ser Met
    8015                 8020                 8025


Ser Thr  Thr Ala Pro Trp Trp  Ser Trp Lys Ala Thr  Thr Arg Ala
    8030                 8035                 8040


Trp Arg  Ser Ser Ser Ala Arg  Ser Ser Pro Thr Ser  Pro Thr Arg
    8045                 8050                 8055


Arg Ser  Thr Cys Pro Pro Arg  Ser Ala Pro Ser Trp  Thr Arg Cys
    8060                 8065                 8070


Ser Ser  Ser Ala Pro Arg Pro  Ser Arg Arg Arg Arg  Cys Arg Thr
    8075                 8080                 8085


Pro Arg  Val Arg Thr Arg Ala  Ser Pro Trp Ser Ala  Thr Ser Ser
    8090                 8095                 8100


Trp Arg  Ala Gly Trp Glu Arg  Val Ala Pro Pro Arg  Ala Trp Lys
    8105                 8110                 8115


Ser Gly  Ala Ser Ser Trp Pro  Trp Ser Trp Pro Trp  Ser Trp Ser
    8120                 8125                 8130


Val Cys  Ala Ala Ser Leu Pro  Thr Arg Arg Pro Cys  Ala Arg Ser
    8135                 8140                 8145


Arg Arg  Thr Cys Thr Thr Ser  Ser Gly Thr Gly Ser  Cys Ala Arg
    8150                 8155                 8160


Pro Ala  Arg Ser Pro Thr Trp  Ser Pro Thr Trp Ser  Pro Thr Trp
    8165                 8170                 8175
```

```
Ala Ser  Cys Thr Arg Thr Ala  Trp Gly Lys Thr Cys  Cys Thr Pro
    8180                8185                8190

Pro Cys  Ala Gly Arg Pro Ala  Ala Thr Thr Ser Ala  Thr Ala Ser
    8195                8200                8205

Thr Cys  Thr Ser Ala Thr Pro  Gly Arg Arg Ala Trp  Ala Cys Gly
    8210                8215                8220

Ser Ser  Ala Trp Arg Ser Arg  Thr Lys Ser Ser Ala  Ser Ser Cys
    8225                8230                8235

Arg Arg  Thr Ser Arg Pro Cys  Gly Pro Gly Ser Thr  Ser Val Pro
    8240                8245                8250

Pro Pro  Arg Thr Trp Pro Thr  Ser Ser Ser Pro Ser  Ala Cys Gly
    8255                8260                8265

Arg Cys  Ala Thr Gly Cys Pro  Thr Leu Ala Lys Ala  Cys Cys Lys
    8270                8275                8280

Thr Phe  Ala Leu Ser Ser Ser  Asn Ala Pro Gly Ser  Cys Pro Pro
    8285                8290                8295

Pro Ala  Pro Arg Cys Pro Arg  Thr Ser Cys Arg Pro  Ser Ala Ser
    8300                8305                8310

Ala Pro  Arg Arg Ser Gly Ala  Thr Ala Thr Cys Cys  Ala Trp Pro
    8315                8320                8325

Thr Thr  Trp Pro Thr Thr Arg  Thr Ser Arg Thr Ser  Ala Ala Arg
    8330                8335                8340

Val Cys  Trp Ser Ala Thr Ala  Ala Ala Thr Ser Ala  Arg Arg Thr
    8345                8350                8355

Ala Pro  Trp Pro Ala Thr Pro  Ser Cys Ala Arg Pro  Arg Ser Ser
    8360                8365                8370
```

```
Ala Pro  Ser Ser Cys Lys Ala  Pro Ala Thr Ala Arg  Ala Arg Gly
    8375                 8380                 8385

Val Asn  Ser Pro Arg Gly Cys  Gly Pro Arg Pro Thr  Cys Ala Ser
    8390                 8395                 8400

Ser Cys  Pro Arg Thr Thr Ile  Pro Ser Arg Ser Gly  Ser Thr Arg
    8405                 8410                 8415

Thr Asn  Pro Ser Arg Pro Arg  Pro Ser Cys Arg Pro  Ala Ser Ser
    8420                 8425                 8430

Pro Arg  Gly Pro Ser Trp Pro  Asn Cys Lys Pro Ser  Arg Asn Pro
    8435                 8440                 8445

Ala Lys  Asn Phe Cys Lys Arg  Ala Thr Gly Ser Thr  Trp Thr Pro
    8450                 8455                 8460

Arg Pro  Glu Arg Ser Ser Thr  Pro Ala Ser Pro Arg  Met Pro Arg
    8465                 8470                 8475

Gly Ser  Ser Lys Lys Leu Lys  Val Glu Leu Pro Pro  Pro Glu Asp
    8480                 8485                 8490

Leu Glu  Glu Asp Trp Glu Ser  Ser Gln Ala Glu Glu  Glu Glu Met
    8495                 8500                 8505

Glu Asp  Trp Asp Ser Thr Gln  Ala Glu Glu Asp Ser  Leu Gln Asp
    8510                 8515                 8520

Ser Leu  Glu Glu Glu Asp Glu  Val Glu Glu Ala Glu  Glu Glu Ala
    8525                 8530                 8535

Ala Ala  Ala Arg Pro Ser Ser  Ser Ala Glu Lys Ala  Ser Ser Thr
    8540                 8545                 8550

Asp Thr  Ile Ser Ala Pro Gly  Arg Gly Arg Gly Gly  Arg Ala His
    8555                 8560                 8565
```

```
Ser Arg  Trp Asp Glu Thr Gly  Arg Phe Pro Asn Pro  Thr Thr Gln
    8570                 8575                 8580

Thr Gly  Lys Lys Glu Arg Gln  Gly Tyr Lys Ser Trp  Arg Gly His
    8585                 8590                 8595

Lys Asn  Ala Ile Val Ser Cys  Leu Gln Ala Cys Gly  Gly Asn Ile
    8600                 8605                 8610

Ser Phe  Thr Arg Arg Tyr Leu  Leu Phe His Arg Gly  Val Asn Phe
    8615                 8620                 8625

Pro Arg  Asn Ile Leu His Tyr  Tyr Arg His Leu His  Ser Pro Tyr
    8630                 8635                 8640

Tyr Cys  Phe Gln Glu Glu Ala  Glu Thr Gln Gln Gln  Gln Lys Thr
    8645                 8650                 8655

Ser Gly  Ser Ser Ser Lys Ile  His Ser Gly Gly Arg  Trp Thr Glu
    8660                 8665                 8670

Asp Arg  Gly Glu Arg Ala Gly  Ala Asp Pro Gly Ala  Glu Glu Pro
    8675                 8680                 8685

Asp Leu  Ser His Pro Leu Cys  His Leu Pro Ala Glu  Ser Gly Ala
    8690                 8695                 8700

Gly Ala  Gly Thr Glu Ser Gln  Glu Pro Phe Ser Ala  Leu Ala His
    8705                 8710                 8715

Pro Gln  Leu Ser Val Ser Gln  Glu Arg Arg Pro Thr  Ser Ala His
    8720                 8725                 8730

Ser Arg  Gly Arg Arg Gly Ser  Leu Gln Gln Val Leu  Arg Ala His
    8735                 8740                 8745

Ser Arg  Val Ala Arg Ala Arg  Pro His Thr Glu Lys  Gly Gly Asn
    8750                 8755                 8760
```

```
Tyr Val  Thr Thr Cys Ala Leu  Arg Pro Thr Ile Met  Ser Lys Glu
    8765                 8770                 8775

Ile Pro  Thr Pro Tyr Met Trp  Ser Tyr Gln Pro Gln  Met Gly Leu
    8780                 8785                 8790

Ala Ala  Gly Ala Ala Gln Asp  Tyr Ser Thr Arg Met  Asn Trp Leu
    8795                 8800                 8805

Ser Ala  Gly Pro Ala Met Ile  Ser Arg Val Asn Asp  Ile Arg Ala
    8810                 8815                 8820

His Arg  Asn Gln Ile Leu Leu  Glu Gln Ser Ala Ile  Thr Ala Thr
    8825                 8830                 8835

Pro Arg  His His Leu Asn Pro  Arg Asn Trp Pro Ala  Ala Leu Val
    8840                 8845                 8850

Tyr Gln  Glu Ile Pro Gln Pro  Thr Thr Val Leu Leu  Pro Arg Asp
    8855                 8860                 8865

Ala Gln  Ala Glu Val Gln Leu  Thr Asn Ser Gly Val  Gln Leu Ala
    8870                 8875                 8880

Gly Gly  Ala Ala Leu Cys Arg  His Arg Pro Ala Gln  Gly Ile Lys
    8885                 8890                 8895

Arg Leu  Val Ile Arg Gly Arg  Gly Thr Gln Leu Asn  Asp Glu Val
    8900                 8905                 8910

Val Ser  Ser Ser Leu Gly Leu  Arg Pro Asp Gly Val  Phe Gln Leu
    8915                 8920                 8925

Ala Gly  Ser Gly Arg Ser Ser  Phe Thr Pro Arg Gln  Ala Val Leu
    8930                 8935                 8940

Thr Leu  Glu Ser Ser Ser Ser  Gln Pro Arg Ser Gly  Gly Ile Gly
    8945                 8950                 8955
```

```
Thr Leu  Gln Phe Val Glu Glu  Phe Thr Pro Ser Val  Tyr Phe Asn
    8960                8965                8970

Pro Phe  Ser Gly Ser Pro Gly  His Tyr Pro Asp Glu  Phe Ile Pro
    8975                8980                8985

Asn Phe  Asp Ala Ile Ser Glu  Ser Val Asp Gly Tyr  Asp Met Ser
    8990                8995                9000

His Gly  Gly Ala Ala Asp Leu  Ala Arg Leu Arg His  Leu Asp His
    9005                9010                9015

Cys Arg  Arg Phe Arg Cys Phe  Ala Arg Asp Leu Ala  Glu Phe Ala
    9020                9025                9030

Tyr Phe  Glu Leu Pro Glu Glu  His Pro Gln Gly Pro  Ala His Gly
    9035                9040                9045

Val Arg  Ile Ile Val Glu Gly  Gly Leu Asp Ser His  Leu Leu Arg
    9050                9055                9060

Ile Phe  Ser Gln Arg Pro Ile  Leu Val Glu Arg Glu  Gln Gly Gln
    9065                9070                9075

Thr Leu  Leu Thr Leu Tyr Cys  Ile Cys Asn His Pro  Gly Leu His
    9080                9085                9090

Glu Ser  Leu Cys Cys Leu Leu  Cys Thr Glu Tyr Asn  Lys Ser Asp
    9095                9100                9105

Gln Arg  Leu Leu Arg Thr Arg  Leu Trp Cys Ser Cys  Tyr Gln Pro
    9110                9115                9120

Val Pro  Val Leu His Arg Glu  Arg Asp Arg Ala Pro  Ala Pro Val
    9125                9130                9135

Ala Pro  Gln Glu Val Pro His  Leu Ala Val Pro Gly  Leu Pro Asp
    9140                9145                9150
```

```
Arg Arg  Cys Gln Pro Leu Arg  Gln Arg Arg Ser Pro  Ala Glu Arg
    9155                9160                9165

Pro Cys  Gln Pro Tyr Phe Phe  His Pro Gln Lys Gln  Ala Pro Ala
    9170                9175                9180

Leu Pro  Thr Leu Pro Pro Arg  Asp Leu Ser Val Arg  Leu Arg Thr
    9185                9190                9195

Leu Pro  Ser His Leu Pro Pro  Asp Pro Glu Tyr His  Ser Ala Ala
    9200                9205                9210

Pro Arg  Tyr Gln Pro Asn Tyr  Pro Pro Thr Pro Pro  Ser Arg Pro
    9215                9220                9225

Phe Leu  Ile Tyr His Tyr Arg  Arg Trp Leu Leu Leu  Leu Val Leu
    9230                9235                9240

Pro Arg  Pro Val Asp Pro Arg  Ser Pro Thr Gln Ser  Pro Glu Glu
    9245                9250                9255

Val Arg  Lys Cys Lys Phe Gln  Glu Pro Trp Lys Phe  Leu Lys Cys
    9260                9265                9270

Tyr Arg  Gln Lys Ser Asp Met  His Pro Ser Trp Ile  Met Ile Ile
    9275                9280                9285

Gly Ile  Val Asn Ile Leu Ala  Cys Thr Leu Ile Ser  Phe Val Ile
    9290                9295                9300

Tyr Pro  Cys Phe Asp Phe Gly  Trp Asn Ser Pro Glu  Ala Leu Tyr
    9305                9310                9315

Leu Pro  Pro Glu Pro Asp Thr  Pro Pro Gln Gln Gln  Pro Gln Ala
    9320                9325                9330

His Ala  Leu Pro Pro Pro Gln  Pro Arg Pro Gln Tyr  Met Pro Ile
    9335                9340                9345
```

```
Leu Asp  Tyr Glu Ala Glu Pro  Gln Arg Pro Met Leu  Pro Ala Ile
    9350                 9355                 9360

Ser Tyr  Phe Asn Leu Thr Gly  Gly Asp Asp Pro Thr  Gly Gln Gln
    9365                 9370                 9375

Arg Gln  Arg Pro Ser Pro Gly  His Gly Arg Pro Arg  Leu Gly Ala
    9380                 9385                 9390

Ala Thr  Arg Pro Thr Ser His  Ser Ser Ala Ala Gly  Glu Ser Arg
    9395                 9400                 9405

Gln Gly  Ala Ala Gly Arg His  Ser His Pro Pro Val  Gln Glu Arg
    9410                 9415                 9420

His Leu  Leu Pro Gly Glu Thr  Gly Gln Asp Leu Leu  Arg Gly His
    9425                 9430                 9435

Pro Asp  Arg Pro Ser Pro Leu  Leu Arg Ala Pro Ala  Ala Ala Pro
    9440                 9445                 9450

Glu Val  His Leu Pro Gly Arg  Ser Gln Pro His Arg  His His Pro
    9455                 9460                 9465

Ala Val  Gly Arg Tyr Gln Gly  Val His Pro Leu Leu  Leu Arg Leu
    9470                 9475                 9480

Pro Arg  Leu Arg Pro His Ser  Asp Gln Asp Pro Leu  Arg Pro Pro
    9485                 9490                 9495

Arg Pro  Pro Pro His Glu Leu  Ile Thr Pro Leu Ser  Ser Glu Ile
    9500                 9505                 9510

Lys Ile  Ile Leu Met Met Ile  Ile Lys Lys Ile Ile  Ile Phe Glu
    9515                 9520                 9525

Ile Lys  Ile Gln Ser Tyr Phe  Glu Phe Asn Lys Asn  Lys Glu Ser
    9530                 9535                 9540
```

```
Leu Thr  Asn Leu Ile Pro Gly  Leu Cys Pro Cys Phe  Leu Pro Thr
    9545                 9550                 9555

Pro Pro  His Ser Pro Leu Pro  Ser Ser Gly Thr Ala  Gly Pro Gly
    9560                 9565                 9570

Gly Leu  Gln Thr Ser Ser Thr  Arg Arg Gly Cys Gln  Ile Pro Pro
    9575                 9580                 9585

Val Pro  Gln Ser Ser Phe Tyr  Leu Leu Ser Asp Val  Gln Lys Ala
    9590                 9595                 9600

Arg Pro  Gly Gly Leu Arg Pro  Arg Leu Pro Leu Arg  Cys Arg Gln
    9605                 9610                 9615

Arg Thr  Asp Arg Ala Leu His  Gln Pro Pro Leu Arg  Leu Phe Arg
    9620                 9625                 9630

Trp Ile  Pro Arg Glu Ala Pro  Gly Gly Val Val Pro  Ala Thr Gly
    9635                 9640                 9645

Pro Arg  His His Gln Glu Arg  Gly Asn His Pro Gln  Ala Gly Arg
    9650                 9655                 9660

Gly Gly  Gly Pro Arg Leu Val  Gly Lys Thr His Leu  Gln His Gly
    9665                 9670                 9675

His Gln  Gly Arg Arg Pro Ser  Gln Tyr Phe Lys Gln  His His Phe
    9680                 9685                 9690

Pro Asn  Cys Cys Pro Phe Leu  Gln Gln Gln Trp Asn  Phe Lys Pro
    9695                 9700                 9705

Gln Cys  Leu His Thr Ile Ser  Ser Ile Ser His Ile  His Phe Arg
    9710                 9715                 9720

His Lys  Ser Trp Lys Arg Ser  Ser Asp Phe Lys Val  Val Asp Cys
    9725                 9730                 9735
```

```
Thr Thr  Asn Ser Ser Ser Tyr  Ile Gln Leu Lys His  His Ser Lys
    9740                9745                9750

Asn Arg  Gln Arg Ala Ile Tyr  Leu Gln Trp Lys Gln  Arg Thr Gly
    9755                9760                9765

Tyr Lys  Pro Lys Lys Arg Thr  Ser Phe Arg Cys Tyr  Cys Asn Ile
    9770                9775                9780

Tyr Trp  Lys Trp Leu Arg Leu  Trp Ile Leu Trp Lys  Asn Lys Thr
    9785                9790                9795

Arg Asn  Tyr Gln Asn Trp Ser  Arg Ile Lys Phe Cys  Gln Ser Asn
    9800                9805                9810

Ser Cys  Gln Thr Arg His Arg  Phe Lys Phe Leu Arg  Trp Cys Leu
    9815                9820                9825

Asp Ser  Trp Lys Gln Thr Gly  Gln Ala Asn Thr Leu  Asp Tyr Pro
    9830                9835                9840

Pro Lys  Pro Leu Ser Ile Thr  Phe Arg Gln Arg Cys  Gln Ile Tyr
    9845                9850                9855

Ser Leu  Ser Tyr Lys Met Arg  Ser Asn Thr Arg His  Cys Gly Ser
    9860                9865                9870

Gly Gly  Cys Tyr Cys Arg Ile  Ser Thr Lys Ser Asn  His Ser Gln
    9875                9880                9885

Lys Arg  His Ser Phe Pro Ile  Phe Arg Trp Cys Thr  His Val Lys
    9890                9895                9900

Leu Ile  Asn Gly Arg Leu Leu  Glu Leu Gly Gly Thr  Asp His Ser
    9905                9910                9915

Lys Cys  Ser Leu Tyr Lys Cys  Cys Gly Ile His Ala  Lys Tyr Arg
    9920                9925                9930
```

```
Cys Ile  Ser Lys Asn Pro Lys  Asn Thr Lys His Ser  Gln Ser Gly
    9935                 9940                 9945


Ile Phe  Asn Trp Arg Asn Tyr  Tyr Ala Asn Asp Thr  Asn His Asn
    9950                 9955                 9960


Phe Gln  Trp His Lys Arg His  Asn Pro Ser His Leu  Leu Tyr Asp
    9965                 9970                 9975


Phe Tyr  Met Ala Val Asp Trp  Arg Leu Gly Gln Lys  Tyr Tyr Leu
    9980                 9985                 9990


Cys Tyr  Gln Leu Ile Leu Phe   Phe Leu His Arg Pro   Gly Ile Ile
    9995                 10000                10005


Pro Pro   Ser Lys Pro Thr Pro   Phe Pro Thr Thr Phe   Val Tyr Met
    10010                10015                10020


Glu Thr   Leu Lys Gln Lys Asn   Lys Val Gln Val Phe   Tyr Ile Asn
    10025                10030                10035


Ser Phe   Thr Gly Leu Glu Gln   Leu Phe Phe Leu His   Pro Pro Arg
    10040                10045                10050


Thr Trp   Asn Thr Pro Pro Ser   Pro Pro Ala Gln Pro   Thr Ser Glu
    10055                10060                10065


Cys His   Trp Trp Thr Cys Phe   Trp Ser Pro Arg Ser   Thr Gln Phe
    10070                10075                10080


Gln Ser   Glu Pro Val Ser Asp   Arg Ser Gly Arg Asn   Pro Pro Gly
    10085                10090                10095


Thr Pro   Ala Ser Ala Pro His   Ser Ser Thr Ala Glu   Asp Cys Pro
    10100                10105                10110


Arg Trp   Ser Gly Ser Arg Leu   Ser Gly Arg Ser Arg   Arg Ala Ala
    10115                10120                10125
```

```
Val Gly   Ile Ile Val Arg Glu   Arg Asp Arg Pro Val   Val Ser His
    10130                10135                10140


Gln Ala   Pro Gln Gln Ser Leu   Pro Pro Pro Leu Arg   Gln Ala Ala
    10145                10150                10155


Ala Gln   Gly Val Arg Val Gln   Gly Leu Pro Gln His   Asp Ala His
    10160                10165                10170


Gly Pro   Gln His Gln Ser Ser   Gly Ala Ala Gly Ala   Ala Ala His
    10175                10180                10185


Ala Asn   Leu Ala Gln Val Thr   Ala Val Arg Ala Thr   Gln Asp His
    10190                10195                10200


Gln Val   Val Gln Gln Ser Ile   Val Gln His Ala Pro   Ala Glu Thr
    10205                10210                10215


His Arg   Gly Lys Asp Ala Thr   His Val Ala Val Val   Pro Asp Pro
    10220                10225                10230


Gln Val   Asn Gln Val Ala Leu   Pro Pro Glu Asp Ala   Ala His Val
    10235                10240                10245


His Asp   Leu Leu Gly His Val   Ala Val His His Leu   Pro Val Pro
    10250                10255                10260


His His   Pro Leu Val Glu His   Ala Ala Pro Asp Asp   Pro Ala Glu
    10265                10270                10275


Pro Gln   Gly Gln His Arg Pro   Ala Arg His Ala Ala   Lys Arg Pro
    10280                10285                10290


Arg Ile   Pro Ala Met Thr Met   Glu Asp Pro Pro Leu   Val Pro Val
    10295                10300                10305


Asp His   Leu Gly Ala Glu Gln   Val Tyr Val Gly Thr   Ala Gln Ala
    10310                10315                10320
```

```
Tyr Ala   His Ala Ser Leu Gln   His Ser Gln Leu Leu   Gly Gly Gln
    10325                 10330                 10335


Asn His   Ile Pro Gly His Gly   Glu Leu Leu Gln Asp   Ser Glu Pro
    10340                 10345                 10350


Arg Arg   Thr Gly Gln Ser Ser   His Ile Thr Tyr Ile   Val His Gly
    10355                 10360                 10365


Gln Gly   Ile Ala Ile Arg Gln   His Arg Val Ile Leu   His Gln Arg
    10370                 10375                 10380


Ser Ala   Gly Leu Gly Leu Leu   Thr Ala Trp Gly Gly   Arg Pro Ile
    10385                 10390                 10395


Arg Val   Met Ala Gly Arg Gly   Ser Cys Ser Arg Pro   Cys His Asp
    10400                 10405                 10410


Ala Val   Ala Phe Gly His Phe   Arg Thr Cys Cys Ser   Arg Thr Trp
    10415                 10420                 10425


Ser Gly   Arg Cys Thr Pro Ile   Ala Gly Gly Gly Leu   Gly Ala Trp
    10430                 10435                 10440


Asn Ala   Arg Cys Ser Cys Lys   Thr Ala Thr Leu Ser   Asp Arg Ala
    10445                 10450                 10455


Ala Asp   Leu Gly Pro Gln Glu   Arg Ser His His Ala   Leu Ser His
    10460                 10465                 10470


Arg Pro   Pro Trp Asn Gly Pro   Gly Pro Ala Arg Cys   Asn Phe Val
    10475                 10480                 10485


Gly Phe   Arg Arg Arg Gly Arg   Glu Glu Gln Glu Glu   Pro Leu Thr
    10490                 10495                 10500


Phe Asn   Pro Asn Gly Leu Gly   Ala Leu Gln Asn Glu   Gly His Gly
    10505                 10510                 10515
```

```
Asp Gly   Thr Ser Arg Pro Arg   Cys Val Gly Gly Lys   Gln Pro Gly
    10520                 10525                 10530

Gln Arg   Tyr Gly Ser Arg Asp   Val Pro Arg Trp Leu   Pro Ala Lys
    10535                 10540                 10545

Pro Pro   Arg Ala His Pro Glu   Thr Arg Gln Arg Lys   Arg Glu Gly
    10550                 10555                 10560

Ser Leu   Ile Pro Gln Pro Ser   Cys Tyr Thr Pro Ala   Pro Ser Pro
    10565                 10570                 10575

Asp Asn   Phe His Phe Ser Ser   Leu Glu Phe Glu Leu   Val Pro Glu
    10580                 10585                 10590

Val Asn   Pro Ser Gln Pro Lys   Ala Arg Ala Glu His   Pro Pro Pro
    10595                 10600                 10605

Ala Phe   Leu Ser Thr Pro Ser   Phe Gln Asp Ile Leu   Leu Leu Val
    10610                 10615                 10620

His Leu   Gln Gln Ile Asp Lys   Arg Asn Ile Lys Ile   Ser Ala Ala
    10625                 10630                 10635

Ile Pro   Glu Leu Leu Pro Gln   Gln Leu Val Leu Phe   His Ile Val
    10640                 10645                 10650

Ser Glu   Ile Phe Ser His Arg   Thr Pro Arg Asn Lys   Arg Arg Ala
    10655                 10660                 10665

Ser His   Ile Thr Asp Lys Pro   Lys Ser Pro Pro Val   Ser Ile Ala
    10670                 10675                 10680

Lys Cys   Lys Ile Glu Ile Ser   Met Leu Ala Arg Pro   Gly Asp Ile
    10685                 10690                 10695

Phe Gln   Ile Thr Gly Gln Lys   Ile Gly Ala Ile Phe   Lys Lys Ile
    10700                 10705                 10710
```

```
Asn Lys   Arg Lys Ile Phe Gln   Val His Val Gly Leu   Gly Asn Asn
    10715                10720                10725

Asp Gly   Val Ser Ala Arg Gly   Ala Phe Gln His Gly   Leu Ala Asp
    10730                10735                10740

Leu Lys   Asn Lys Lys Asn Ile   Lys Pro Cys Pro Gly   Glu Gln Val
    10745                10750                10755

Gly Lys   Ser Phe Ser Pro Ala   Pro Gly Arg Pro Arg   Gly Leu Arg
    10760                10765                10770

Arg Asp   Pro Arg Lys Asn Cys   Arg Tyr Asp Lys Pro   Ser Gln Arg
    10775                10780                10785

Asp Val   Pro Gly Gly Arg Arg   Glu Phe Glu Lys Lys   His Thr Pro
    10790                10795                10800

Pro Glu   His Trp Ser Pro Val   Lys Lys Ser Gly Arg   Gly Ser Asn
    10805                10810                10815

Glu Ala   Leu Gln Arg Ser Leu   Ser Ser Pro Ala Lys   Arg Cys His
    10820                10825                10830

Ala Asp   Glu Ala Gln Asn Phe   Gln Val Arg Lys Lys   Cys Asn Tyr
    10835                10840                10845

Ser Pro   Pro Ala Gln Ala Ala   Lys Leu Pro Ile Pro   Pro Asp Thr
    10850                10855                10860

His Thr   Lys Pro Gln Arg Pro   Leu Thr Glu Arg Gln   Gln Gln Arg
    10865                10870                10875

His Thr   Thr Gly Ala Arg Val   Arg Glu Lys Thr Glu   Leu Pro Val
    10880                10885                10890

Arg Pro   Leu Ser Ala Gln Tyr   Ile Ala Pro Asp Leu   His Arg Lys
    10895                10900                10905
```

```
Gly Gln   Ser Leu Lys Ile Pro   Ala Lys Ser His Thr   Pro Ser Thr
    10910                10915                10920


Arg Pro   Glu Thr Gly Asp Thr   Leu Arg Lys Ile Arg   Ala Leu Pro
    10925                10930                10935


Gln Thr   Ala Lys Leu Pro Ser   Phe Pro Gly Ser His   Ala Thr Ser
    10940                10945                10950


Ser Lys   His Asp Phe Gln Ile   Pro Ser Thr Val Lys   Asn Ile Thr
    10955                10960                10965


Arg Pro   Ala Pro Asn Gly Arg   Arg Ser Arg Ser Gln   Ser Pro Ser
    10970                10975                10980


Ser Leu   Pro Lys Phe Lys Gln   Leu Ile Cys Ile Leu   Thr Arg Thr
    10985                10990                10995


Lys Ser   Leu Arg Tyr Ile Ile   Asp Asp
    11000                11005
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Val Ile Trp Gly Gly Arg Lys Val Ile Gly Cys Gly Ser Gly Asp Arg
            20                  25                  30


Gly Arg Gly Gly Arg Phe Asp Asp Val Ala Met Arg Arg Ser Arg Phe
        35                  40                  45


Ala Ser Ser Arg Gly Lys Ser Asp Val Lys Arg Gly Val Val Thr Arg
    50                  55                  60
```

```
Lys Tyr Ser Ile Phe Pro Arg Ser Leu Thr Gly Asn Glu Val Phe Leu
65                  70                  75                  80

Gly Gly Cys Lys Lys Arg Ala Ile Phe Ala Arg Lys Leu Asn Glu Glu
                85                  90                  95

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

Gly Arg Val Asp Phe Asp Arg Leu Arg Gly Gly Phe Asp Tyr Arg Ile
        115                 120                 125

Phe His Leu Asn Phe Arg Val Arg Cys Gln Ser Pro Val Phe Leu Arg
    130                 135                 140

Thr Ile Ser Phe Pro Arg Lys Cys His Leu Thr Val Thr Ile Thr Val
145                 150                 155                 160

Leu Arg Arg Lys Leu Arg Ser Pro Asp Pro Leu Trp Cys Thr Leu Ser
                165                 170                 175

Thr Ile Cys Ser Asp Ala Ala Leu Ser Gln Tyr Leu Leu Pro Ala Cys
            180                 185                 190

Val Leu Glu Val Ala Glu Cys Ala Ser Lys Ile Ala Thr Thr Arg Gln
        195                 200                 205

Gly Leu Thr Asp Asn Cys Met Lys Asn Leu Leu Arg Val Arg Arg Phe
    210                 215                 220

Ala Leu Leu Arg Asp Val Arg Ala Arg Tyr Thr Arg His Leu Leu Thr
225                 230                 235                 240

Ser Tyr Ser Ile Thr Gly Ser Leu Val His Ser Pro Tyr Met Glu Phe
                245                 250                 255

Arg Val Thr Leu Thr Val Asn Gly Pro Pro Gly Pro Pro Asn Asp Pro
            260                 265                 270
```

```
Arg Pro Leu Thr Ser Ile Met Thr Tyr Val Pro Ile Val Thr Pro Ile
        275                 280                 285

Gly Thr Phe His Arg Gln Trp Val Glu Tyr Leu Arg Thr Ala His Leu
    290                 295                 300

Ala Val His Gln Val Tyr His Met Pro Ser Thr Pro Pro Ile Asp Val
305                 310                 315                 320

Asn Asp Gly Lys Trp Pro Ala Trp His Tyr Ala Gln Tyr Met Thr Leu
                325                 330                 335

Trp Asp Phe Pro Thr Trp Gln Tyr Ile Tyr Val Leu Val Ile Ala Ile
            340                 345                 350

Thr Met Val Met Arg Phe Trp Gln Tyr Ile Asn Gly Arg Gly Arg Phe
        355                 360                 365

Asp Ser Arg Gly Phe Pro Ser Leu His Pro Ile Asp Val Asn Gly Ser
    370                 375                 380

Leu Phe Trp His Gln Asn Gln Arg Asp Phe Pro Lys Cys Arg Asn Asn
385                 390                 395                 400

Ser Ala Pro Leu Thr Gln Met Gly Gly Arg Arg Val Arg Trp Glu Val
                405                 410                 415

Tyr Ile Ser Arg Ala Arg Leu Val Asn Arg Gln Ile Thr Arg Ser Phe
            420                 425                 430

Ile Ala Val Val Tyr His Ser Ile Ala Asn Ala Val Ser Ala Ser Asp
        435                 440                 445

Thr Thr Val Ser Asn Leu Ser Cys Arg Ser Trp Ser Gly Thr Gly Gln
    450                 455                 460

Val Ser Ile Lys Val Thr Arg Gln Val Gly Asp Gln Lys Leu Gly Leu
465                 470                 475                 480
```

```
Ser Arg Gln Arg Arg Leu Leu Arg Phe Ala Pro Ile Gly Leu Thr Asp
                485                 490                 495

Ile His Phe Ala Phe Leu Ser Thr Gly Val His Ser Gln Phe Asn Tyr
            500                 505                 510

Ser Ser Gly Ser Thr Tyr Asp Ser Leu Ala Ser Ala Thr Met Gly Ala
        515                 520                 525

Arg Ala Ser Val Leu Ser Gly Gly Glu Leu Asp Arg Trp Glu Lys Ile
    530                 535                 540

Arg Leu Arg Pro Gly Gly Lys Lys Lys Tyr Lys Leu Lys His Ile Val
545                 550                 555                 560

Trp Ala Ser Arg Glu Leu Glu Arg Phe Ala Val Asn Pro Gly Leu Leu
                565                 570                 575

Glu Thr Ser Glu Gly Cys Arg Gln Ile Leu Gly Gln Leu Gln Pro Ser
            580                 585                 590

Leu Gln Thr Gly Ser Glu Glu Leu Arg Ser Leu Tyr Asn Thr Val Ala
        595                 600                 605

Thr Leu Tyr Cys Val His Gln Arg Ile Glu Val Lys Asp Thr Lys Glu
    610                 615                 620

Ala Leu Glu Lys Ile Glu Glu Glu Gln Asn Lys Ser Lys Lys Lys Ala
625                 630                 635                 640

Gln Gln Ala Ala Ala Asp Thr Gly Asn Ser Ser Gln Val Ser Gln Asn
                645                 650                 655

Tyr Pro Ile Val Gln Asn Leu Gln Gly Gln Met Val His Gln Ala Ile
            660                 665                 670

Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Val Val Glu Glu Lys Ala
        675                 680                 685
```

```
Phe Ser Pro Glu Val Ile Pro Met Phe Ser Ala Leu Ser Glu Gly Ala
    690                 695                 700

Thr Pro Gln Asp Leu Asn Thr Met Leu Asn Thr Val Gly Gly His Gln
705                 710                 715                 720

Ala Ala Met Gln Met Leu Lys Glu Thr Ile Asn Glu Glu Ala Ala Glu
                725                 730                 735

Trp Asp Arg Leu His Pro Val His Ala Gly Pro Ile Ala Pro Gly Gln
            740                 745                 750

Met Arg Glu Pro Arg Gly Ser Asp Ile Ala Gly Thr Thr Ser Thr Leu
        755                 760                 765

Gln Glu Gln Ile Gly Trp Met Thr Asn Asn Pro Pro Ile Pro Val Gly
    770                 775                 780

Glu Ile Tyr Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg
785                 790                 795                 800

Met Tyr Ser Pro Thr Ser Ile Leu Asp Ile Arg Gln Gly Pro Lys Glu
                805                 810                 815

Pro Phe Arg Asp Tyr Val Asp Arg Phe Tyr Lys Thr Leu Arg Ala Glu
            820                 825                 830

Gln Ala Ser Gln Glu Val Lys Asn Trp Met Thr Glu Thr Leu Leu Val
        835                 840                 845

Gln Asn Ala Asn Pro Asp Cys Lys Thr Ile Leu Lys Ala Leu Gly Pro
    850                 855                 860

Ala Ala Thr Leu Glu Glu Met Met Thr Ala Cys Gln Gly Val Gly Gly
865                 870                 875                 880

Pro Gly His Lys Ala Arg Val Leu Ala Glu Ala Met Ser Gln Val Thr
                885                 890                 895
```

```
Asn Ser Ala Thr Ile Met Met Gln Arg Gly Asn Phe Arg Asn Gln Arg
            900                 905                 910

Lys Thr Val Lys Cys Phe Asn Cys Gly Lys Glu Gly His Ile Ala Lys
        915                 920                 925

Asn Cys Arg Ala Pro Arg Lys Lys Gly Cys Trp Lys Cys Gly Lys Glu
    930                 935                 940

Gly His Gln Met Lys Asp Cys Thr Glu Arg Gln Ala Asn Phe Leu Gly
945                 950                 955                 960

Lys Ile Trp Pro Ser His Lys Gly Arg Pro Gly Asn Phe Leu Gln Ser
                965                 970                 975

Arg Pro Glu Pro Thr Ala Pro Pro Glu Glu Ser Phe Arg Phe Gly Glu
            980                 985                 990

Glu Thr Thr Thr Pro Ser Gln Lys  Gln Glu Pro Ile Asp  Lys Glu Leu
        995                 1000                1005

Tyr Pro  Leu Ala Ser Leu Arg  Ser Leu Phe Gly Asn  Asp Pro Ser
    1010                1015                1020

Ser Gln  Ser Ser Val Thr Gly  Pro Leu Glu Ser Thr  Arg Ala Ala
    1025                1030                1035

Lys Pro  Leu Ile Ser Leu Asp  Cys Ala Phe Leu Pro  Ala Ile Cys
    1040                1045                1050

Cys Leu  Pro Leu Pro Arg Ala  Phe Leu Asp Pro Gly  Arg Cys His
    1055                1060                1065

Ser His  Cys Pro Phe Leu Ile  Lys Gly Asn Cys Ile  Ala Leu Ser
    1070                1075                1080

Glu Val  Ser Phe Tyr Ser Gly  Gly Trp Gly Gly Ala  Gly Gln Gln
    1085                1090                1095
```

```
Gly Gly  Gly Leu Gly Arg Gln  Gln Ala Cys Trp Gly  Cys Gly Gly
    1100                1105                1110

Leu Tyr  Gly Phe Gly Gly Lys  Asn Gln Gln Ile Cys  Arg Ser Glu
    1115                1120                1125

Phe Ile  Tyr Val Gly Cys Gly  Glu Arg Gly Asn Glu  Met Val Leu
    1130                1135                1140

Trp Val  Leu Trp Val Cys Ile  Asn Glu Ser Val Arg  Tyr Arg His
    1145                1150                1155

Met Leu  Ala Thr Val His Val  Ala Ser His Pro Arg  Lys Thr Trp
    1160                1165                1170

Pro Glu  Phe Glu His Asn Val  Met Thr Arg Cys Asn  Val His Leu
    1175                1180                1185

Gly Ser  Arg Arg Gly Met Phe  Met Pro Tyr Gln Cys  Asn Met Gln
    1190                1195                1200

Phe Val  Lys Val Leu Leu Glu  Pro Asp Ala Met Ser  Arg Val Ser
    1205                1210                1215

Leu Thr  Gly Val Phe Asp Met  Asn Val Glu Leu Trp  Lys Ile Leu
    1220                1225                1230

Arg Tyr  Asp Glu Ser Lys Thr  Arg Cys Arg Ala Cys  Glu Cys Gly
    1235                1240                1245

Gly Lys  His Ala Arg Leu Gln  Pro Val Cys Val Glu  Val Thr Glu
    1250                1255                1260

Asp Leu  Arg Pro Asp His Leu  Val Leu Ser Cys Asn  Gly Thr Glu
    1265                1270                1275

Phe Gly  Ser Ser Gly Glu Glu  Ser Asp Ser Glu Cys  Leu Gly Leu
    1280                1285                1290
```

```
Gly Val  Ser Leu His Glu Gly  Gln Asn Asp Asn Leu  Trp Phe Ser
    1295                1300                1305

Val Cys  Cys Ser Ser Met Ser  Gly Ser Ala Ser Phe  Glu Gly Gly
    1310                1315                1320

Val Phe  Ser Pro Tyr Leu Thr  Gly Arg Leu Pro Ser  Trp Ala Gly
    1325                1330                1335

Val Arg  Gln Asn Val Met Gly  Ser Thr Val Asp Gly  Arg Pro Val
    1340                1345                1350

Gln Pro  Ala Asn Ser Ser Thr  Leu Thr Tyr Ala Thr  Leu Ser Ser
    1355                1360                1365

Ser Ser  Val Asp Ala Ala Ala  Ala Ala Ala Ala Ala  Ser Ala Ala
    1370                1375                1380

Ser Ala  Val Arg Gly Met Ala  Leu Gly Ala Gly Tyr  Tyr Ser Ser
    1385                1390                1395

Leu Val  Ala Asn Ser Ser Ser  Thr Asn Asn Pro Ala  Ser Leu Asn
    1400                1405                1410

Glu Glu  Lys Leu Leu Leu Leu  Met Ala Gln Leu Glu  Ala Leu Thr
    1415                1420                1425

Gln Arg  Leu Gly Glu Leu Thr  Gln Gln Val Ala Gln  Leu Gln Ala
    1430                1435                1440

Glu Thr  Arg Ala Ala Val Ala  Thr Val Lys Thr Lys  Lys Met Asn
    1445                1450                1455

Gln Ile  Asn Gly Asp Gly Cys  Phe His Arg Val Leu  Asn Leu Tyr
    1460                1465                1470

Leu Ile  Phe Arg Ala Arg Ala  Leu Asp His Arg Ser  Arg Ser Leu
    1475                1480                1485
```

```
Ser Thr  Arg Trp Ile Phe Ser  Arg Thr Arg Arg Trp  Ala Trp Met
    1490                 1495                 1500

Leu Arg  Tyr Met Gly Met Ser  Pro Ser Arg Gly Trp  Arg Leu His
    1505                 1510                 1515

Cys Arg  Ala Ser Cys Ser Gly  Met Val Leu Ile Thr  Gln Ser Gln
    1520                 1525                 1530

Gly Arg  Arg Ala Trp Cys Cys  Thr Met Ser Leu Arg  Arg Arg Leu
    1535                 1540                 1545

Met Ala  Thr Gly Ser Pro Leu  Val Val Leu Thr Asn  Leu Leu Ser
    1550                 1555                 1560

Trp Glu  Gly Cys Met Arg Gly  Glu Met Arg Cys Ile  Leu Ala Trp
    1565                 1570                 1575

Ile Leu  Arg Leu Ala Met Phe  Pro Pro Arg Ser Arg  Arg Gly Phe
    1580                 1585                 1590

Met Leu  Cys Arg Thr Thr Ser  Thr Val Tyr Pro Val  His Leu Gly
    1595                 1600                 1605

Asn Leu  Ser Cys Asn Leu Glu  Gly Lys Ala Lys Asn  Leu Glu Thr
    1610                 1615                 1620

Pro Leu  Pro Pro Arg Phe Ser  Met His Ser Ser Met  Met Met Ala
    1625                 1630                 1635

Met Gly  Pro Trp Ala Ala Ala  Trp Ala Lys Thr Phe  Arg Gly Ser
    1640                 1645                 1650

Asp Thr  Ser Leu Trp Ser Trp  Val Ser Ser Ser Ala  Ile Leu Met
    1655                 1660                 1665

Asn Leu  Gly Arg Arg Val Pro  Asp Trp Gly Thr Lys  Val Pro Ser
    1670                 1675                 1680
```

```
Ile Pro  Gly Ala Leu Pro Ser  Gln Ile Cys Ile Ser  Gln Ala Leu
    1685                1690                1695

Ser Ser  Glu Gly Gly Ile Met  Ser Thr Cys Gly Ala  Met Lys Lys
    1700                1705                1710

Thr Val  Ser Gly Ala Gly Glu  Met Ser Trp Ala Glu  Ser Arg Phe
    1715                1720                1725

Arg Ser  Ser Trp Asp Leu Pro  Gln Pro Val Gly Pro  Met Thr Pro
    1730                1735                1740

Met Thr  Gly Cys Arg Trp Leu  Arg Glu Arg Gln Leu  Pro Ser Ser
    1745                1750                1755

Arg Arg  Arg Gly Ala Thr Ser  Phe Ile Ile Ser Arg  Thr Cys Met
    1760                1765                1770

Phe Ser  Arg Thr Ser Ser Ala  Arg Arg Arg Ser Pro  Pro Ser Glu
    1775                1780                1785

Arg Ser  Ser Cys Ser Glu Ala  Lys Phe Phe Ser Gly  Leu Ser Pro
    1790                1795                1800

Ser Ala  Met Gly Ile Leu Glu  Arg Val Cys Cys Lys  Ser Ser Arg
    1805                1810                1815

Arg Ser  Gln Ser Ser Val Met  Cys Ser Arg Ala Ser  Arg Ser Ser
    1820                1825                1830

Arg Pro  Pro Arg Phe Ala Gly  Trp Gly Asp Cys Gly  Ser Arg Ala
    1835                1840                1845

Pro Gly  Asp Gly Arg Pro Ala  Arg Pro Gly Ser Gly  Pro Ser Arg
    1850                1855                1860

Ala Ala  Gly Ser Ala Ser Ala  Trp Ser Pro Ser Arg  Arg Gly Ala
    1865                1870                1875
```

```
Arg Arg  Ala Gly Arg Leu Arg  Gly Cys Ala Ser Gly  Ser Ser Gly
    1880                1885                1890

Trp Ser  Arg Thr Ala Pro Gly  Arg Arg Pro Ala Arg  Arg Pro Gly
    1895                1900                1905

Ser Asn  Ala Val Arg Ser Ala  Pro Arg Pro Arg Gly  Pro Trp Arg
    1910                1915                1920

Gly Ala  Tyr Leu Trp Lys Cys  Val Arg Arg Arg Asp  Arg Gly Gly
    1925                1930                1935

Thr Gly  Arg Arg Ala Trp Gly  Arg Gly Arg Arg Thr  Arg Gly Arg
    1940                1945                1950

Arg Arg  Pro Arg Arg Ser Trp  Arg Arg Arg Ser Arg  Thr Pro Arg
    1955                1960                1965

Ala Arg  Gly Arg Gly Gly Trp  Gly Gln Lys Arg Gly  Phe Leu Arg
    1970                1975                1980

Ala Phe  Cys Val Ser Tyr Leu  Trp Ser Pro Ala Arg  Val Pro Ala
    1985                1990                1995

Gly Gln  Arg Gly Cys Pro Cys  Pro Arg Arg Pro Thr  Leu Trp Ala
    2000                2005                2010

Gly Pro  Arg Ala Gly Cys Arg  Gly Pro Arg Arg Arg  Gly Thr Pro
    2015                2020                2025

Pro Thr  Pro Arg Arg Arg Pro  Gly Ser Arg Pro Ala  Arg Arg Arg
    2030                2035                2040

Pro Arg  Gly Arg Gly Ser Gly  Arg Cys Pro Pro Ala  Gly Pro Pro
    2045                2050                2055

Ser Pro  Gly Tyr Ala Ser Thr  Cys Pro Pro Arg Pro  His Pro Gly
    2060                2065                2070
```

```
Arg Leu  Ala Cys Lys Cys Arg  Pro Arg Asp Arg Gly  Ser Arg Pro
    2075                2080                2085

Gly Gly  Tyr Lys Arg Gly Arg  Ala Pro Ala Arg Pro  His Cys Leu
    2090                2095                2100

Pro Asp  Arg Cys Pro Gly Ala  Pro Ala Val Gly Val  Gly Ile Pro
    2105                2110                2115

Ser Arg  Arg Arg Ala Pro Arg  His Ser Gly Cys Gln  Phe Leu Glu
    2120                2125                2130

Thr Arg  Arg Ile Tyr Arg Cys  Arg Trp Arg Arg Leu  Ser Ala Pro
    2135                2140                2145

Arg Pro  Phe Gly Gln Lys Arg  Arg Ser Phe Cys Cys  Arg Ala Trp
    2150                2155                2160

Trp Arg  Arg Ser Arg Arg Gly  Arg Trp Arg Ala Ala  Trp Arg Trp
    2165                2170                2175

Ser Ala  Trp Ser Gly Ser Phe  Pro Cys Arg Arg Ala  Pro Trp Arg
    2180                2185                2190

Arg Cys  Ala Ala Arg Thr Arg  Ala Pro Arg Thr Ser  Ile Arg Gly
    2195                2200                2205

Arg Arg  Trp Ala Arg Arg Ala  Arg Phe Pro Ala Ser  Arg Gly Cys
    2210                2215                2220

Ala Gly  Gly Pro Arg Trp Trp  Pro Pro Arg Arg Ala  Gly Ala Arg
    2225                2230                2235

Trp Ser  Ser Arg Gly Ala Arg  Pro Cys Ala Ser Arg  Arg Gly Ala
    2240                2245                2250

Ala Gly  Pro Ala Ala Arg Arg  Gly Gly Arg Arg Pro  Arg Arg Cys
    2255                2260                2265
```

```
Arg Ala  Gly Ala Arg Gly Arg  Ser Ser Cys Arg Cys  Pro Asp Cys
    2270                 2275                 2280

Pro Ala  Pro Leu Ala Ser Arg  Ala Arg Pro Ala Arg  Ala Arg Arg
    2285                 2290                 2295

Gly Gly  Ala Cys Pro Arg Ala  Trp Gly Ala Ala Arg  Arg Arg Thr
    2300                 2305                 2310

Cys Arg  Arg Cys Arg Arg Arg  Arg Gly Ala Pro Arg  Gly Arg Arg
    2315                 2320                 2325

Cys Arg  Trp Gly Ser Ser Ala  Pro Arg Gly Cys Trp  Arg Ala Arg
    2330                 2335                 2340

Ser Arg  Thr Ala Arg Ala Arg  Ala Arg Gly Ala Pro  Cys Arg Gly
    2345                 2350                 2355

Trp Ser  Val Ala Ala Phe Arg  Arg Gly Arg Arg Ser  Gly Gly Arg
    2360                 2365                 2370

Trp Arg  Gly Ser Trp Arg Arg  Trp Trp Ala Phe Gly  Arg Cys Ser
    2375                 2380                 2385

Gly Arg  Gly Ala Gly Arg Pro  Ser Pro Ser Gly Arg  Arg Ser Pro
    2390                 2395                 2400

Ala Ala  Trp Arg Arg Ala Arg  Arg Arg Gly Arg Pro  Gly Arg Ser
    2405                 2410                 2415

Ser Arg  Gly Ser Leu Gly Cys  His Thr Ala Gly Pro  Ser Ala Ser
    2420                 2425                 2430

Thr Ala  Arg Gly Glu Gly Thr  Leu Arg Gly Pro Ser  Ser Thr Leu
    2435                 2440                 2445

Arg Gly  Gly Thr Arg Pro Asp  Arg His Gly Lys Ser  Pro Pro Cys
    2450                 2455                 2460
```

```
Arg Thr  Gly Arg Pro Cys Arg  Arg Ser Ser Pro Ser  Pro Arg Gly
    2465                2470                2475

Gly Arg  Lys Leu Ala Arg Pro  Cys Ala Gly Arg Cys  Gly Gly Arg
    2480                2485                2490

Arg Cys  Arg Ala Pro Pro Gly  Thr Gly Ala Ser Arg  Gly Arg Arg
    2495                2500                2505

Ser Arg  Pro Ala Pro Arg Val  Gly Ser Pro Cys Ala  Ser Cys Arg
    2510                2515                2520

Arg Gly  Ala Lys Arg Lys His  Arg Arg Gly Ser Cys  Pro Arg Gly
    2525                2530                2535

Ala Ser  Cys Glu Cys Gly Lys  Ala Gly Ala Pro Arg  Pro Gly Cys
    2540                2545                2550

Pro Gly  Arg Arg Gly Arg Ser  Arg Arg Ser Arg Cys  Cys Ala Arg
    2555                2560                2565

Arg Cys  Arg Val Pro Arg Ile  Ala Gly Gly Pro Arg  Gly Ala Ala
    2570                2575                2580

Ser Ala  Arg Arg Arg Ala Arg  Arg Gly Arg Ala Arg  Ala Ala Arg
    2585                2590                2595

Gly Pro  Ser Arg Arg Arg Gly  Gly Trp Arg Gly Arg  Lys Ser Arg
    2600                2605                2610

Asp Pro  Arg Pro Gly Arg Ser  Ala Ser Gly Pro Gly  Thr Asp Gly
    2615                2620                2625

Thr Val  Gly Pro Arg Pro Phe  Phe Arg Gly Arg Ser  Arg Arg Cys
    2630                2635                2640

Gly Gly  Arg Arg Ala Ser Gly  Pro Thr Ala Gly Gly  Arg Gly Arg
    2645                2650                2655
```

```
Gly Arg  Ala Arg Arg Ala Ala  Gly Pro Arg Arg Val  Ser Pro Ala
    2660                2665                2670

Arg Gly  Arg Ala Ala Cys Arg  Arg Thr Pro Ser Arg  Cys Arg Phe
    2675                2680                2685

Pro His  Arg Arg Gly Arg Ala  Phe Arg Cys Glu Asp  Ala Ser Arg
    2690                2695                2700

Trp Gly  Arg Thr Gly Ser Pro  Ala Thr Ser Trp Arg  Asn Gly Cys
    2705                2710                2715

Cys Asp  Gly Ser Arg Asn Ala  Asp Gly Ala Pro Ser  Thr Arg Ala
    2720                2725                2730

Cys Val  Tyr Thr Ser Val Arg  Ser Ala Arg Asn Ala  Ala Arg Asp
    2735                2740                2745

Ala Arg  Ala Ala Arg Ala Val  Pro Gly Phe Leu Trp  Arg Gly Ile
    2750                2755                2760

Ser Val  Gly Ser Gly Ala Leu  Ala Ala Ala Ser Arg  Ala Val Leu
    2765                2770                2775

Arg Leu  Gly His Arg Arg Gly  His Arg Leu Pro Arg  Trp Trp Ser
    2780                2785                2790

Cys Arg  Ala Arg Ala Gly Gly  Arg Ser Arg Pro Arg  Leu Gly Arg
    2795                2800                2805

Val Gly  Glu Arg Gly Arg Gly  Arg Ala Gly Arg Ser  Cys Pro Gly
    2810                2815                2820

Ser Asp  Ala Ala Glu Ser Gly  Gln Trp Ala Ala Ala  Ala Arg Gly
    2825                2830                2835

Leu Ala  Gly Ala Phe Pro Gly  Arg Ala Gly Gly Pro  Asp Gly Thr
    2840                2845                2850
```

```
Ser Pro  Arg Arg Arg Trp Trp  Leu Arg Pro Arg Leu  Ala Gly Cys
    2855                 2860                 2865

Arg Ala  Pro Gly Ala Pro Pro  Pro Cys Pro Val Ser  Ser Trp Ala
    2870                 2875                 2880

Leu Leu  Pro Cys Arg Ser Glu  Ala Ala Ala Arg Thr  Arg Ala Gly
    2885                 2890                 2895

Arg Gln  Gly Arg Leu Gly Ala  Arg Arg Gln Gly Arg  Gln Gly His
    2900                 2905                 2910

Val Gly  Ala Ala Arg Gly Gln  Val Leu Val Leu Arg  Pro Glu Lys
    2915                 2920                 2925

Thr Gly  Val Ser Asp Asp Ala  Thr Val Asp Val Leu  Asp Leu Thr
    2930                 2935                 2940

Pro Leu  Gly Glu Gly His Gly  Thr Arg Glu Phe Glu  Pro Glu Arg
    2945                 2950                 2955

Glu Phe  Asp Arg Ile Asn Leu  Gly Ile Val Asp Gly  Gly Leu Pro
    2960                 2965                 2970

Gln Asp  Leu Leu His Val Ala  Arg Val Val Leu Val  Gly Asp Leu
    2975                 2980                 2985

Gly His  Glu Leu Leu Asp Leu  Leu Leu Leu Lys Val  Ser Ala Ala
    2990                 2995                 3000

Gly Ala  Leu Asp Gly Gly Arg  Glu Val Val Gly Asp  Ala Ala His
    3005                 3010                 3015

Glu Leu  Arg Glu Gly Val His  Ala Gly Leu Val Pro  Asp Ala Ala
    3020                 3025                 3030

Val Asp  His Gly Ser Val Gly  Val Ala Arg Ala His  Asp His Leu
    3035                 3040                 3045
```

```
Gly Glu  Val Glu Leu Asp Val  Ala Arg Glu Asp Arg  Val Val Ala
    3050                3055                3060

Glu Ala  Leu Val Glu Val Val  Glu Arg Gly Gly Asp  Val Leu Gly
    3065                3070                3075

Asp Glu  Glu Val His Asp Pro  Ala Ala Glu Arg His  Leu Ala Asp
    3080                3085                3090

Val Ala  Gln Gly Phe Gln Ala  Phe His Gly Leu Val  Glu Val His
    3095                3100                3105

Gly Glu  Val Glu Lys Leu Gly  Val Ala Arg Arg Asp  Gly Gln Leu
    3110                3115                3120

Leu Leu  Gln Lys Thr Asp Glu  Leu Gly Asp Gly Gly  Ala His Leu
    3125                3130                3135

Ala Leu  Glu Gly Pro Gly Gly  Leu Leu Phe His Leu  Leu Leu Phe
    3140                3145                3150

Leu Leu  His His Leu Phe Tyr  Phe Leu Leu Arg Arg  Arg Trp Arg
    3155                3160                3165

Gly Arg  Gly Pro Ala Ser Pro  Ala Ala His Gly Gln  Thr Val Asp
    3170                3175                3180

Glu Ala  Leu Asp Gly Leu Pro  Ala Pro Ala Thr His  Gly Leu Gly
    3185                3190                3195

Asp Gly  Ala Pro Val Leu Ala  Gly Pro Gln His Glu  Asp Ala Ala
    3200                3205                3210

Ala His  Leu Gln Val Ala Ala  Gly Gly Val Ser Val  Gly Gln Gly
    3215                3220                3225

Glu Gly  Ala Asp Asp Ala Ser  Tyr Gln Leu Thr Arg  Arg Asp Ser
    3230                3235                3240
```

```
Ala Gln  Gly Pro Glu Arg Leu  Glu Ile His Gly Ile  Arg Lys Pro
    3245                3250                3255

Leu Asn  Glu Gly Phe Glu Pro  Val Ala Val Ala Arg  Ala Glu Pro
    3260                3265                3270

Gly Phe  Leu Phe Phe Gly Tyr  Leu Val Gly Arg Arg  Ala Gly Asp
    3275                3280                3285

Ala Ala  Gly Asp Glu Val Glu  Val Gly Gly Pro Glu  Thr Ala Asp
    3290                3295                3300

Gly Gly  Glu Glu His Gln Val  Leu Gly Pro Gly Leu  Leu Asp Ala
    3305                3310                3315

Gln Thr  Val Gly His Ala Pro  Gly Val Val Leu Thr  Pro Gly Glu
    3320                3325                3330

Val Leu  Val Val Val Leu His  Glu Pro Leu His Gly  His Leu Leu
    3335                3340                3345

Leu Ala  Arg Ala Ala Val His  Ala Arg Glu Pro Glu  Pro Ala Leu
    3350                3355                3360

Arg Leu  Asp Glu Arg Gln Val  Gly Asp Asp Ala Leu  Gly Glu Asp
    3365                3370                3375

Gly Leu  Leu Asp Leu Gly Glu  Gly Gly Leu Glu Val  Val Glu Val
    3380                3385                3390

Asp Glu  Ala Val Val Gly Ser  Gly Val Asp Gly Val  Gly Ala Val
    3395                3400                3405

Gly His  Asp Gly Pro Val Asp  Gly Leu Val Ala Gly  Ser His Glu
    3410                3415                3420

Leu Val  Val Leu Glu Ala Arg  Val Gly Ala Arg Val  Glu Asp Val
    3425                3430                3435
```

```
Val Val  Ala Gly Ala His Glu  Val Leu Val Ser Asp  Glu Glu Val
    3440                3445                3450

Arg Arg  Arg Leu Ala Val Glu  Arg Pro Ser Leu Gly  Gly Gly Gly
    3455                3460                3465

Ala Gly  Arg Glu Val Leu Glu  His Glu Ala Val Val  Ala Val Asp
    3470                3475                3480

Val Pro  Gly His Pro Gly Asp  Ala Gly Gly Gly Gly  Gly Gly Ala
    3485                3490                3495

Arg Glu  Leu Ala Asp Ala Val  Pro Asp Val Ala Gln  Arg Gln Glu
    3500                3505                3510

Val Val  His Gly Gly Arg Gly  Leu Ala Arg Glu Ala  Arg Ala Val
    3515                3520                3525

Val Asp  Ala Leu Asp Ile Arg  Ala Lys Thr Lys Ala  Val Ser Gly
    3530                3535                3540

Ser Thr  Pro Trp Pro Gly Gly  Ala Asn Gly Leu Gly  Cys Ala Cys
    3545                3550                3555

Thr Pro  Val Arg Ile Ser Asn  Gln Ala Gly Ala Ala  Ala Asn Val
    3560                3565                3570

Val Leu  Ala Leu Pro Ser Arg  Pro Lys Pro Ala Asn  Glu Thr Ser
    3575                3580                3585

Arg Ile  Arg Arg Arg Val Val  Phe Trp Pro Trp Ser  Leu Val Met
    3590                3595                3600

Lys Asn  Ala Arg Lys Ala Ala  Ala Arg Asp Gly Ser  Leu Pro Ser
    3605                3610                3615

Gly Glu  Arg Ile Ala Arg Val  Ala Leu Arg Cys Ala  Pro Val Arg
    3620                3625                3630
```

```
Ala Ser  Ala Leu Gly Ala Gly  Arg Ile Pro Arg Leu  Thr Trp Ala
    3635                 3640                 3645

Trp Leu  Pro Arg Arg Phe Gln  Asp Pro Leu Ala Ser  Arg Leu Leu
    3650                 3655                 3660

Gln Leu  Arg Ser Glu Pro Leu  Phe Phe Phe Leu Val  Phe Leu Pro
    3665                 3670                 3675

Asp Ala  Ser Arg Thr Ala Ala  Asp Ala Pro Pro Pro  Ser Thr Thr
    3680                 3685                 3690

Thr Ala  Pro Thr Ala Ala Ala  Ala Thr Ala Gly Ala  Ser Ala Pro
    3695                 3700                 3705

Ala Pro  Ala Ala Ala Ser His  Tyr Arg Gly Gly Arg  Arg Glu Arg
    3710                 3715                 3720

Ser Arg  Arg Ser Val Pro Gly  Leu Gly Arg Gly Arg  Gly Ala Gly
    3725                 3730                 3735

Ala Ala  Gly Gly Val Val Ala  Gly Ala Ala Pro Ala  Arg Ala Asp
    3740                 3745                 3750

Glu Lys  Gly Arg Ser Arg Gly  Leu Arg Ala Gln Ala  Glu Pro Val
    3755                 3760                 3765

Gln Arg  Gln Glu Arg Arg Gly  Ala Arg Gly Asp Ala  Arg Leu Pro
    3770                 3775                 3780

Leu Pro  Arg Gly Ala Gly Ala  Ala Ala Arg Pro Gly  Pro Lys Ala
    3785                 3790                 3795

Gly Ala  Glu Gly Arg Gly Phe  Arg Gly Gly Arg Ala  Asp Gly Asp
    3800                 3805                 3810

Gln Pro  Arg Ala Arg Ala Arg  Gly Arg Gly Gln Pro  Gly His Gly
    3815                 3820                 3825
```

```
Val Arg  Ala Asp Arg Glu Gly  Gly Glu Gln Leu Pro  Lys Ile Leu
    3830                3835                3840

Gln Gln  Pro Arg Ala His Leu  Asp Arg Ala Arg Gly  Gly Asp Pro
    3845                3850                3855

Gly Pro  Asp Ala Pro Val Gly  Pro Ala Gly Gly His  Arg Ala Glu
    3860                3865                3870

Pro His  Glu Gln Ala Ala Asp  Gly Ala Ala Val Ser  Gly Gly Ala
    3875                3880                3885

Ala Gln  Ser Gly Gln Arg Asp  Val Gln Gly Gly Ala  Ala Glu Tyr
    3890                3895                3900

His Arg  Ala Arg Gly Pro Leu  Ala Pro Gly Pro Gly  Glu His Phe
    3905                3910                3915

Ala Glu  His Arg Gly Ala Gly  Ala Arg Ala Ala Ala  Val Arg Glu
    3920                3925                3930

Ala Gly  Gly His Gln Leu Leu  Gly Ala Glu Ser Gly  Gln Val Leu
    3935                3940                3945

Arg Glu  Asp Leu Gln Asp Pro  Val Arg Ala His Arg  Gln Gly Gly
    3950                3955                3960

Glu Asp  Arg Arg Val Leu His  Ala His Asp Pro Glu  Ser Ala Asp
    3965                3970                3975

Pro Glu  Arg Arg Ser Gly Gly  Val Pro Gln Arg Gln  Asp Ala Pro
    3980                3985                3990

Arg Gly  Glu Arg Gln Pro Pro  Ala Arg Ala Glu Arg  Pro Gly Ala
    3995                4000                4005

Asp Ala  Gln Pro Ala Ala Gly  Pro Asp Arg Gly Arg  Asp Arg Gly
    4010                4015                4020
```

```
Gly Glu  Leu Leu His Gly Arg  Gly Pro Ala Leu Ala  Ala Gln Pro
    4025                4030                4035

Pro Gly  Leu Gly Ser Cys Arg  Arg Phe Pro Leu Arg  Gly Gly Gly
    4040                4045                4050

Gly Arg  Gly Gly Gly Gly Arg  Val Pro Gly Arg Leu  Met Ala Arg
    4055                4060                4065

Pro Tyr  Phe Cys Met Gln Gln  Gln Pro Pro Pro Pro  Pro Pro Asp
    4070                4075                4080

Pro Ala  Met Arg Ala Ala Leu  Gln Ser Gln Pro Ser  Gly Ile Asn
    4085                4090                4095

Ser Ser  Asp Asp Trp Thr Gln  Ala Met Gln Arg Ile  Met Ala Leu
    4100                4105                4110

Thr Thr  Arg Asn Pro Glu Ala  Phe Arg Gln Gln Pro  Gln Ala Asn
    4115                4120                4125

Arg Leu  Ser Ala Ile Leu Glu  Ala Val Val Pro Ser  Arg Ser Asn
    4130                4135                4140

Pro Thr  His Glu Lys Val Leu  Ala Ile Val Asn Ala  Leu Val Glu
    4145                4150                4155

Asn Lys  Ala Ile Arg Gly Asp  Glu Ala Gly Leu Val  Tyr Asn Ala
    4160                4165                4170

Leu Leu  Glu Arg Val Ala Arg  Tyr Asn Ser Thr Asn  Val Gln Thr
    4175                4180                4185

Asn Leu  Asp Arg Met Val Thr  Asp Val Arg Glu Ala  Val Ser Gln
    4190                4195                4200

Arg Glu  Arg Phe His Arg Glu  Ser Asn Leu Gly Ser  Met Val Ala
    4205                4210                4215
```

```
Leu Asn  Ala Phe Leu Ser Thr  Gln Pro Ala Asn Val  Pro Arg Gly
    4220                4225                4230

Gln Glu  Asp Tyr Thr Asn Phe  Ile Ser Ala Leu Arg  Leu Met Val
    4235                4240                4245

Ala Glu  Val Pro Gln Ser Glu  Val Tyr Gln Ser Gly  Pro Asp Tyr
    4250                4255                4260

Phe Phe  Gln Thr Ser Arg Gln  Gly Leu Gln Thr Val  Asn Leu Ser
    4265                4270                4275

Gln Ala  Phe Lys Asn Leu Gln  Gly Leu Trp Gly Val  Gln Ala Pro
    4280                4285                4290

Val Gly  Asp Arg Ala Thr Val  Ser Ser Leu Leu Thr  Pro Asn Ser
    4295                4300                4305

Arg Leu  Leu Leu Leu Leu Val  Ala Pro Phe Thr Asp  Ser Gly Ser
    4310                4315                4320

Val Ser  Arg Asp Ser Tyr Leu  Gly Tyr Leu Leu Asn  Leu Tyr Arg
    4325                4330                4335

Glu Ala  Ile Gly Gln Ala His  Val Asp Glu Gln Thr  Tyr Gln Glu
    4340                4345                4350

Ile Thr  His Val Ser Arg Ala  Leu Gly Gln Glu Asp  Pro Gly Asn
    4355                4360                4365

Leu Glu  Ala Thr Leu Asn Phe  Leu Leu Thr Asn Arg  Ser Gln Lys
    4370                4375                4380

Ile Pro  Pro Gln Tyr Ala Leu  Ser Thr Glu Glu Glu  Arg Ile Leu
    4385                4390                4395

Arg Tyr  Val Gln Gln Ser Val  Gly Leu Phe Leu Met  Gln Glu Gly
    4400                4405                4410
```

```
Ala Thr  Pro Ser Ala Ala Leu  Asp Met Thr Ala Arg  Asn Met Glu
    4415                4420                4425

Pro Ser  Met Tyr Ala Arg Asn  Arg Pro Phe Ile Asn  Lys Leu Met
    4430                4435                4440

Asp Tyr  Leu His Arg Ala Ala  Ala Met Asn Ser Asp  Tyr Phe Thr
    4445                4450                4455

Asn Ala  Ile Leu Asn Pro His  Trp Leu Pro Pro Pro  Gly Phe Tyr
    4460                4465                4470

Thr Gly  Glu Tyr Asp Met Pro  Asp Pro Asn Asp Gly  Phe Leu Trp
    4475                4480                4485

Asp Asp  Val Asp Ser Ser Val  Phe Ser Pro Arg Pro  Gly Thr Asn
    4490                4495                4500

Ala Val  Trp Lys Lys Glu Gly  Gly Asp Arg Arg Pro  Ser Ser Ala
    4505                4510                4515

Leu Ser  Gly Arg Ala Gly Ala  Ala Ala Ala Val Pro  Glu Ala Ala
    4520                4525                4530

Ser Pro  Phe Pro Ser Leu Pro  Phe Ser Leu Asn Ser  Val Arg Ser
    4535                4540                4545

Ser Glu  Leu Gly Arg Leu Thr  Arg Pro Arg Leu Leu  Gly Glu Glu
    4550                4555                4560

Glu Tyr  Leu Asn Asp Ser Leu  Leu Arg Pro Glu Arg  Glu Lys Asn
    4565                4570                4575

Phe Pro  Asn Asn Gly Ile Glu  Ser Leu Val Asp Lys  Met Ser Arg
    4580                4585                4590

Trp Lys  Thr Tyr Ala His Glu  His Arg Asp Glu Pro  Arg Ala Ser
    4595                4600                4605
```

```
Ser Ala  Gly Thr Arg Arg Arg  Gln Arg His Asp Arg  Gln Arg Gly
    4610                 4615                 4620

Leu Val  Trp Asp Asp Glu Asp  Ser Ala Asp Asp Ser  Ser Val Leu
    4625                 4630                 4635

Asp Leu  Gly Gly Ser Gly Gly  Asn Pro Phe Ala His  Leu Arg Pro
    4640                 4645                 4650

Arg Ile  Gly Arg Leu Met Glu  Ser Glu Lys Ile Lys  Asp Gly Thr
    4655                 4660                 4665

His Gln  Gly His Gly Asp Gln  Arg Ala Phe Phe Ser  Val Val Cys
    4670                 4675                 4680

Ser Ser  Met Met Arg Arg Val  Tyr Pro Glu Gly Pro  Pro Pro Ser
    4685                 4690                 4695

Tyr Glu  Ser Val Met Gln Gln  Ala Val Ala Ala Ala  Met Gln Pro
    4700                 4705                 4710

Pro Leu  Glu Ala Pro Tyr Val  Pro Pro Arg Tyr Leu  Ala Pro Thr
    4715                 4720                 4725

Glu Gly  Arg Asn Ser Ile Arg  Tyr Ser Glu Leu Ala  Pro Leu Tyr
    4730                 4735                 4740

Asp Thr  Thr Arg Leu Tyr Leu  Val Asp Asn Lys Ser  Ala Asp Ile
    4745                 4750                 4755

Ala Ser  Leu Asn Tyr Gln Asn  Asp His Ser Asn Phe  Leu Thr Thr
    4760                 4765                 4770

Val Val  Gln Asn Asn Asp Phe  Thr Pro Thr Glu Ala  Ser Thr Gln
    4775                 4780                 4785

Thr Ile  Asn Phe Asp Glu Arg  Ser Arg Trp Gly Gly  Gln Leu Lys
    4790                 4795                 4800
```

```
Thr Ile  Met His Thr Asn Met  Pro Asn Val Asn Glu  Phe Met Tyr
    4805                4810                4815

Ser Asn  Lys Phe Lys Ala Arg  Val Met Val Ser Arg  Lys Thr Pro
    4820                4825                4830

Asn Gly  Val Asp Asp Asp Tyr  Asp Gly Ser Gln Asp  Glu Leu Thr
    4835                4840                4845

Tyr Glu  Trp Val Glu Phe Glu  Leu Pro Glu Gly Asn  Phe Ser Val
    4850                4855                4860

Thr Met  Thr Ile Asp Leu Met  Asn Asn Ala Ile Ile  Asp Asn Tyr
    4865                4870                4875

Leu Ala  Val Gly Arg Gln Asn  Gly Val Leu Glu Ser  Asp Ile Gly
    4880                4885                4890

Val Lys  Phe Asp Thr Arg Asn  Phe Arg Leu Gly Trp  Asp Pro Val
    4895                4900                4905

Thr Glu  Leu Val Met Pro Gly  Val Tyr Thr Asn Glu  Ala Phe His
    4910                4915                4920

Pro Asp  Ile Val Leu Leu Pro  Gly Cys Gly Val Asp  Phe Thr Glu
    4925                4930                4935

Ser Arg  Leu Ser Asn Leu Leu  Gly Ile Arg Lys Arg  Gln Pro Phe
    4940                4945                4950

Gln Glu  Gly Phe Gln Ile Leu  Tyr Glu Asp Leu Glu  Gly Gly Asn
    4955                4960                4965

Ile Pro  Ala Leu Leu Asp Val  Glu Ala Tyr Glu Lys  Ser Lys Glu
    4970                4975                4980

Asp Ser  Thr Ala Ala Ala Thr  Ala Ala Val Ala Thr  Ala Ser Thr
    4985                4990                4995
```

```
Glu Val  Arg Gly Asp Asn Phe  Ala Ser Ala Ala Ala  Ala Ala Glu
    5000                5005                5010

Ala Ala  Glu Thr Glu Ser Lys  Ile Val Ile Gln Pro  Val Glu Lys
    5015                5020                5025

Asp Ser  Lys Asp Arg Ser Tyr  Asn Val Leu Ala Asp  Lys Lys Asn
    5030                5035                5040

Thr Ala  Tyr Arg Ser Trp Tyr  Leu Ala Tyr Asn Tyr  Gly Asp Pro
    5045                5050                5055

Glu Lys  Gly Val Arg Ser Trp  Thr Leu Leu Thr Thr  Ser Asp Val
    5060                5065                5070

Thr Cys  Gly Val Glu Gln Val  Tyr Trp Ser Leu Pro  Asp Met Met
    5075                5080                5085

Gln Asp  Pro Val Thr Phe Arg  Ser Thr Arg Gln Val  Ser Asn Tyr
    5090                5095                5100

Pro Val  Val Gly Ala Glu Leu  Leu Pro Val Tyr Ser  Lys Ser Phe
    5105                5110                5115

Phe Asn  Glu Gln Ala Val Tyr  Ser Gln Gln Leu Arg  Ala Phe Thr
    5120                5125                5130

Ser Leu  Thr His Val Phe Asn  Arg Phe Pro Glu Asn  Gln Ile Leu
    5135                5140                5145

Val Arg  Pro Pro Ala Pro Thr  Ile Thr Thr Val Ser  Glu Asn Val
    5150                5155                5160

Pro Ala  Leu Thr Asp His Gly  Thr Leu Pro Leu Arg  Ser Ser Ile
    5165                5170                5175

Arg Gly  Val Gln Arg Val Thr  Val Thr Asp Ala Arg  Arg Arg Thr
    5180                5185                5190
```

```
Cys Pro  Tyr Val Tyr Lys Ala  Leu Gly Val Val Ala  Pro Arg Val
    5195                5200                5205

Leu Ser  Ser Arg Thr Phe Lys  Met Ser Ile Leu Ile  Ser Pro Ser
    5210                5215                5220

Asn Asn  Thr Gly Trp Gly Leu  Arg Ala Pro Ser Lys  Met Tyr Gly
    5225                5230                5235

Gly Ala  Arg Gln Arg Ser Thr  Gln His Pro Val Arg  Val Arg Gly
    5240                5245                5250

His Phe  Arg Ala Pro Trp Gly  Ala Leu Lys Gly Arg  Val Arg Ser
    5255                5260                5265

Arg Thr  Thr Val Asp Asp Val  Ile Asp Gln Val Val  Ala Asp Ala
    5270                5275                5280

Arg Asn  Tyr Thr Pro Ala Ala  Ala Pro Val Ser Thr  Val Asp Ala
    5285                5290                5295

Val Ile  Asp Ser Val Val Ala  Asp Ala Arg Arg Tyr  Ala Arg Thr
    5300                5305                5310

Lys Ser  Arg Arg Arg Arg Ile  Ala Arg Arg His Arg  Ser Thr Pro
    5315                5320                5325

Ala Met  Arg Ala Ala Arg Ala  Leu Leu Arg Arg Ala  Arg Arg Thr
    5330                5335                5340

Gly Arg  Arg Ala Met Leu Arg  Ala Ala Arg Arg Ala  Ala Ser Gly
    5345                5350                5355

Ser Ser  Ser Ala Gly Arg Thr  Arg Arg Arg Ala Ala  Thr Ala Ala
    5360                5365                5370

Ala Ala  Ala Ile Ala Ser Met  Ser Arg Pro Arg Arg  Gly Asn Val
    5375                5380                5385
```

```
Tyr Trp  Val Arg Asp Ala Ala  Thr Gly Val Arg Val  Pro Val Arg
    5390                 5395                 5400

Thr Arg  Pro Pro Arg Thr Arg  Cys Leu Arg Asp Val  Asp Val Ser
    5405                 5410                 5415

Gln Arg  Arg Gly Gly Cys Pro  Ser Ala Asn Thr Arg  Lys Arg Cys
    5420                 5425                 5430

Ser Arg  Ser Ser Arg Leu Arg  Ser Thr Ala Pro Arg  Arg Arg Arg
    5435                 5440                 5445

Arg Lys  Glu Ser Pro Ala Asn  Ser Gly Ser Lys Arg  Thr Lys Arg
    5450                 5455                 5460

Arg Arg  Lys Met Thr Asp Trp  Trp Ser Leu Cys Ala  Ser Ser Pro
    5465                 5470                 5475

Pro Gly  Gly Ala Cys Ser Gly  Ala Gly Gly Lys Asn  Arg Cys Cys
    5480                 5485                 5490

Gly Pro  Ala Pro Arg Trp Ser  Ser Arg Pro Ala Ser  Val Pro Ala
    5495                 5500                 5505

Pro Pro  Pro Ser Ala Pro Thr  Thr Arg Cys Thr Gly  Thr Arg Thr
    5510                 5515                 5520

Ser Ser  Ser Arg Arg Ser Ser  Val Trp Ala Ser Leu  Arg Thr Ala
    5525                 5530                 5535

Ser Ala  Ala Ala Pro Arg Pro  Lys Arg Arg Arg Cys  Pro Ser Arg
    5540                 5545                 5550

Trp Thr  Thr Ala Thr Pro Arg  Arg Ala Ser Arg Pro  Cys Ser Arg
    5555                 5560                 5565

Cys Tyr  Arg Ala Arg Arg Arg  Ala Gly Ala Ser Ser  Ala Arg Ala
    5570                 5575                 5580
```

```
Ala Arg  Ile Cys Thr Arg Pro  Cys Ser Trp Cys Pro  Ser Ala Arg
    5585                5590                5595

Ser Trp  Arg Thr Cys Trp Ser  Thr Arg Trp Thr Pro  Arg Cys Ser
    5600                5605                5610

Pro Arg  Ser Arg Cys Gly Pro  Ser Ser Arg Trp Pro  Arg Ala Trp
    5615                5620                5625

Ala Cys  Arg Pro Trp Thr Ser  Arg Ser Pro Arg Ser  Pro Trp Lys
    5630                5635                5640

Arg Arg  Pro Ser Pro Ser Pro  Ala Pro Ala Pro Trp  Arg Cys Arg
    5645                5650                5655

Arg Ile  Pro Gly Cys Gln His  Gln Leu Pro Pro Ala  Leu Ala Glu
    5660                5665                5670

Asp Ala  Ser Thr Ala Arg Pro  Ala Cys Cys Pro Thr  Thr Arg Cys
    5675                5680                5685

Ile Leu  Pro Ser Ser Pro Arg  Arg Ala Thr Ala Ala  Arg Ala Ser
    5690                5695                5700

Thr Ala  Ala Thr Pro Ala Ala  Ala Ala Ala Arg Pro  Pro Pro Ala
    5705                5710                5715

Ala Val  Val Ala Ala Ala Ala  Ala Ala Pro Arg Leu  Pro Pro Trp
    5720                5725                5730

Cys Gly  Glu Cys Ile Ala Ala  Gly Ala Ser Leu Pro  Cys Arg Ala
    5735                5740                5745

Arg Ala  Thr Thr Arg Ala Ser  Pro Phe Asn Tyr Arg  Leu Leu Leu
    5750                5755                5760

Ala Asp  Met Ala Leu Thr Cys  Arg Leu Arg Val Pro  Ile Thr Gly
    5765                5770                5775
```

```
Tyr Arg  Gly Arg Lys Pro Arg  Arg Arg Arg Leu Thr  Gly Asn Gly
    5780                5785                5790

Leu Arg  Arg His His His Arg  Arg Arg Arg Ala Ile  Ser Lys Arg
    5795                5800                5805

Leu Gly  Gly Gly Phe Leu Pro  Ala Leu Ile Pro Ile  Ile Ala Ala
    5810                5815                5820

Ala Ile  Gly Ala Ile Pro Gly  Ile Ala Ser Val Ala  Val Gln Ala
    5825                5830                5835

Ser Gln  Arg His Asp Thr Lys  Lys His Gly Phe Val  Ile Lys Lys
    5840                5845                5850

Lys Met  Asp Arg Ser Trp Ser  Cys Asp Val Cys Phe  Met Glu Asp
    5855                5860                5865

Ile Asn  Phe Ser Ser Leu Ala  Pro Arg His Gly Thr  Arg Pro Phe
    5870                5875                5880

Met Gly  Thr Trp Ser Asp Ile  Gly Asn Ser Gln Leu  Asn Gly Gly
    5885                5890                5895

Ala Phe  Asn Trp Ser Ser Leu  Trp Ser Gly Leu Lys  Asn Phe Gly
    5900                5905                5910

Ser Thr  Leu Lys Thr Tyr Gly  Asn Lys Ala Trp Asn  Ser Ser Thr
    5915                5920                5925

Gly Gln  Ala Leu Arg Glu Lys  Leu Lys Glu Gln Asn  Phe Gln Gln
    5930                5935                5940

Lys Val  Val Asp Gly Leu Ala  Ser Gly Ile Asn Gly  Val Val Asp
    5945                5950                5955

Leu Ala  Asn Gln Ala Val Gln  Lys Gln Ile Asn Ser  Arg Leu Asp
    5960                5965                5970
```

```
Ala Val  Pro Pro Ala Gly Ser  Val Glu Met Pro Gln  Val Glu Glu
    5975                5980                5985

Glu Leu  Pro Pro Leu Asp Lys  Arg Gly Asp Lys Arg  Pro Arg Pro
    5990                5995                6000

Asp Ala  Glu Glu Thr Leu Leu  Thr His Thr Asp Glu  Pro Pro Pro
    6005                6010                6015

Tyr Glu  Glu Ala Val Lys Leu  Gly Leu Pro Thr Thr  Arg Pro Val
    6020                6025                6030

Ala Pro  Leu Ala Thr Gly Val  Leu Lys Pro Ser Ser  Ser Gln Pro
    6035                6040                6045

Ala Thr  Leu Asp Leu Pro Pro  Pro Arg Pro Ser Thr  Val Ala Lys
    6050                6055                6060

Pro Leu  Pro Pro Val Ala Val  Ala Ser Arg Ala Pro  Arg Gly Arg
    6065                6070                6075

Pro Gln  Ala Asn Trp Gln Ser  Thr Leu Asn Ser Ile  Val Gly Leu
    6080                6085                6090

Gly Val  Gln Ser Val Lys Arg  Arg Arg Cys Tyr Lys  Thr Leu Arg
    6095                6100                6105

Leu Thr  Cys Leu Ser Val Cys  Ile Cys Met Ser Ala  Asp Gln Lys
    6110                6115                6120

Glu Glu  Cys Glu Glu Ala Arg  Arg Arg Val Ala Arg  Trp Pro Pro
    6125                6130                6135

His Arg  Cys Cys Pro Ser Gly  Arg Thr Cys Thr Ser  Pro Asp Arg
    6140                6145                6150

Thr Leu  Arg Ser Thr Val Arg  Val Trp Cys Ser Ser  Pro Ala Pro
    6155                6160                6165
```

```
Gln Thr  Pro Thr Ser Val Trp  Gly Thr Ser Leu Gly  Thr Pro Arg
    6170                6175                6180

Trp Arg  Pro Arg Thr Met Pro  Pro Thr Ala Ala Ser  Gly Arg Cys
    6185                6190                6195

Ala Ser  Cys Pro Trp Thr Ala  Arg Thr Thr Pro Thr  Arg Thr Lys
    6200                6205                6210

Cys Ala  Thr Arg Trp Pro Trp  Ala Thr Thr Ala Cys  Trp Thr Trp
    6215                6220                6225

Pro Ala  Pro Thr Leu Thr Ser  Ala Ala Cys Trp Thr  Gly Ala Leu
    6230                6235                6240

Ala Ser  Asn Pro Thr Leu Ala  Pro Pro Thr Thr Ala  Leu Pro Arg
    6245                6250                6255

Glu Leu  Pro Ile Pro Ala Ser  Gly Ser Lys Gln Lys  Gln Ala Met
    6260                6265                6270

Gly Glu  Leu Trp Lys His Thr  His Met Val Trp Pro  Gln Trp Ala
    6275                6280                6285

Glu Arg  Ile Leu Gln Lys Met  Val Phe Lys Leu Glu  Leu Thr Leu
    6290                6295                6300

Gln Arg  Ile Arg Ile Asn Gln  Phe Met Pro Thr Lys  His Phe Asn
    6305                6310                6315

Gln Asn  Arg Lys Glu Lys Lys  Ile Gly Lys Lys Leu  Lys Thr Phe
    6320                6325                6330

Met Ala  Val Glu Leu Leu Lys  Lys Thr Gln Thr Asn  Leu Ala Met
    6335                6340                6345

Ala Pro  Met Leu Asp Pro Pro  Met Lys Lys Glu Val  Lys Leu Asn
    6350                6355                6360
```

```
Leu Lys  Leu Glu Met Met Glu  Phe Gln Pro Lys Asn  Ser Thr Thr
    6365                6370                6375

Trp Leu  Ser Leu Ile Leu Pro  Val Ala Pro Thr Val  Lys Thr Ser
    6380                6385                6390

Ile Lys  Gln Thr Leu Ser Cys  Ile Pro Lys Thr Arg  Ile Trp Lys
    6395                6400                6405

Leu Gln  Thr Arg Met Trp Tyr  Thr Asn Gln Ala Arg  Met Met Gln
    6410                6415                6420

Val Leu  Lys Leu Thr Trp Phe  Ser Ser Leu Cys Pro  Thr Asp Pro
    6425                6430                6435

Thr Thr  Leu Gly Ser Gly Thr  Thr Leu Ser Val Leu  Cys Thr Thr
    6440                6445                6450

Thr Ala  Leu Ala Ile Trp Val  Cys Leu Leu Val Arg  Pro Pro Ser
    6455                6460                6465

Met Leu  Trp Leu Ile Cys Lys  Thr Glu Thr Pro Ser  Cys Pro Thr
    6470                6475                6480

Ser Ser  Cys Leu Thr Leu Trp  Val Thr Glu Pro Gly  Ile Ser Val
    6485                6490                6495

Cys Gly  Thr Arg Arg Trp Thr  Val Met Thr Pro Met  Cys Ala Ser
    6500                6505                6510

Ser Lys  Thr Met Val Trp Arg  Met Asn Cys Gln Thr  Ile Ala Ser
    6515                6520                6525

Pro Trp  Thr Ala Leu Ala Leu  Thr Pro His Thr Lys  Val Lys Lys
    6530                6535                6540

Met Val  Lys Met Val Met Leu  Arg Val Asn Gly Lys  Met Thr Ile
    6545                6550                6555
```

```
Leu Leu  Gln Leu Glu Ile Asn  Tyr Val Lys Val Thr  Phe Ser Pro
    6560                 6565                 6570

Trp Arg  Leu Ile Ser Arg Leu  Thr Cys Gly Glu Val  Ser Ser Thr
    6575                 6580                 6585

Arg Thr  Trp Pro Cys Thr Cys  Pro Thr Pro Thr Ser  Thr Arg Arg
    6590                 6595                 6600

Pro Thr  Ser Arg Cys Arg Pro  Thr Pro Thr Pro Thr  Ile Thr Met
    6605                 6610                 6615

Ala Glu  His Leu Pro Arg Trp  Thr Pro Thr Ser Thr  Ser Gly Arg
    6620                 6625                 6630

Ala Gly  Arg Trp Thr Pro Trp  Thr Thr Ser Thr Pro  Ser Thr Thr
    6635                 6640                 6645

Thr Ala  Thr Arg Ala Cys Ala  Thr Ala Pro Cys Ser  Trp Ala Thr
    6650                 6655                 6660

Gly Ala  Thr Cys Pro Ser Thr  Ser Arg Cys Pro Lys  Ser Phe Ser
    6665                 6670                 6675

Pro Ser  Arg Ala Ser Cys Ser  Cys Pro Gly Pro Thr  Pro Thr Ser
    6680                 6685                 6690

Gly Thr  Ser Ala Arg Thr Ser  Thr Ser Cys Arg Ala  Pro Ala Thr
    6695                 6700                 6705

Thr Cys  Ala Arg Thr Gly Pro  Pro Ser Pro Ser Pro  Ala Ser Thr
    6710                 6715                 6720

Ser Thr  Pro Pro Ser Ser Pro  Trp Arg Thr Thr Pro  Pro Pro Arg
    6725                 6730                 6735

Ser Arg  Pro Cys Cys Ala Thr  Thr Pro Thr Thr Ser  Pro Ser Thr
    6740                 6745                 6750
```

```
Thr Thr  Ser Arg Arg Pro Thr  Cys Ser Thr Pro Ser  Arg Pro Thr
    6755                6760                6765

Pro Pro  Thr Cys Pro Ser Pro  Ser Pro Arg Ala Thr  Gly Pro Pro
    6770                6775                6780

Ser Ala  Asp Gly Pro Ser Arg  Ala Arg Pro Ala Arg  Arg Pro Arg
    6785                6790                6795

Ser Ala  Pro Gly Ser Thr Pro  Thr Ser Ser Thr Arg  Ala Pro Ser
    6800                6805                6810

Pro Thr  Thr Ala Pro Ser Thr  Ser Thr Thr Pro Ser  Arg Arg Ser
    6815                6820                6825

Pro Ser  Pro Ser Thr Pro Pro  Ser Ala Gly Pro Ala  Thr Thr Ala
    6830                6835                6840

Ser Arg  Pro Thr Ser Ser Lys  Ser Ser Ala Pro Ser  Thr Glu Arg
    6845                6850                6855

Asp Thr  Thr Trp Pro Ser Ala  Thr Pro Arg Thr Gly  Ser Trp Ser
    6860                6865                6870

Arg Cys  Trp Pro Thr Thr Thr  Ser Ala Thr Arg Ala  Ser Thr Cys
    6875                6880                6885

Pro Arg  Ala Thr Arg Thr Ala  Cys Thr Pro Ser Ser  Ala Thr Ser
    6890                6895                6900

Ser Pro  Ala Ala Arg Ser Trp  Thr Arg Ser Thr Thr  Arg Thr Thr
    6905                6910                6915

Arg Pro  Ser Pro Trp Pro Thr  Ser Thr Thr Thr Arg  Ala Ser Ser
    6920                6925                6930

Ala Thr  Ser Arg Pro Pro Cys  Ala Arg Ala Ser Pro  Thr Pro Pro
    6935                6940                6945
```

```
Thr Thr  Pro Thr Arg Ser Ser  Ala Arg Ala Pro Ser  Pro Ala Ser
    6950                 6955                 6960

Pro Arg  Lys Ser Ser Ser Ala  Thr Gly Ser Cys Gly  Ala Ser Pro
    6965                 6970                 6975

Ser Pro  Ala Thr Ser Cys Pro  Trp Ala Arg Ser Pro  Thr Ser Ala
    6980                 6985                 6990

Arg Thr  Cys Ser Thr Pro Thr  Pro Pro Thr Arg Thr  Ile Ser Lys
    6995                 7000                 7005

Ser Thr  Pro Trp Met Ser Pro  Pro Phe Ser Met Leu  Ser Ser Lys
    7010                 7015                 7020

Ser Ser  Thr Ser Ser Glu Cys  Thr Ser Pro Thr Ala  Ala Ser Ser
    7025                 7030                 7035

Lys Pro  Ser Thr Cys Ala Arg  Pro Ser Arg Pro Ala  Thr Pro Pro
    7040                 7045                 7050

Pro Lys  Pro Leu Leu Leu Leu  Ala Arg Arg Arg Ala  Pro Ala Ser
    7055                 7060                 7065

Arg Ser  Ser Gly Pro Ser Ser  Ala Thr Trp Ala Ala  Gly Pro Ala
    7070                 7075                 7080

Ser Trp  Ala Pro Ser Thr Ser  Ala Ser Leu Asp Ser  Trp Pro Arg
    7085                 7090                 7095

Thr Ser  Trp Pro Ala Pro Ser  Thr Arg Pro Ala Ala  Arg Pro Gly
    7100                 7105                 7110

Ala Ser  Thr Gly Trp Pro Ser  Pro Gly Thr Arg Ala  Pro Thr His
    7115                 7120                 7125

Ala Thr  Ser Ser Thr Pro Ser  Gly Ser Arg Thr Ser  Ala Ser Ser
    7130                 7135                 7140
```

```
Arg Ser  Thr Ser Ser Ser Thr  Arg Ala Cys Cys Val  Ala Ala Pro
    7145                 7150                 7155

Trp Pro  Pro Arg Thr Ala Ala  Ser Pro Trp Lys Ser  Pro Pro Arg
    7160                 7165                 7170

Pro Cys  Arg Val Arg Ala Arg  Pro Pro Ala Gly Ser  Ser Ala Ala
    7175                 7180                 7185

Cys Ser  Cys Thr Pro Ser Cys  Thr Gly Pro Thr Ala  Pro Trp Thr
    7190                 7195                 7200

Arg Thr  Pro Pro Thr Tyr Arg  Gly Cys Pro Thr Ala  Cys Ser Ser
    7205                 7210                 7215

Arg Pro  Arg Trp Asn Pro Pro  Cys Ala Ala Thr Arg  Lys Arg Ser
    7220                 7225                 7230

Thr Ala  Ser Ser Met Pro Thr  Pro Pro Thr Phe Ala  Pro Thr Ala
    7235                 7240                 7245

Arg Ala  Ser Arg Arg Pro Pro  Pro Ser Thr Ala Ile  Lys Thr Cys
    7250                 7255                 7260

Lys Lys  Pro Val Cys Val Cys  Glu Cys Phe Ile His  Asn Lys Gln
    7265                 7270                 7275

His Met  Phe Met Pro Pro Ser  Leu Arg Leu Leu Tyr  Leu Glu Ile
    7280                 7285                 7290

Glu Gly  Val Leu Pro Ala Leu  Gly Met Ala Arg Gly  Gln Gly Tyr
    7295                 7300                 7305

Val Ala  Glu Leu Val Leu Gly  Gln Pro Leu Glu Leu  Gly Asp Gln
    7310                 7315                 7320

Gln Leu  Gly His Gly Glu Val  Gly Glu Arg Val Ala  Pro Gln Leu
    7325                 7330                 7335
```

```
Ala Arg  Glu Leu Gln Gly Ala  Gln Gln Val Gly Arg  Gly Asp Leu
    7340                 7345                 7350

Glu Ile  Ala Val Gly Thr Arg  Val Leu Arg Ala Arg  Val Ala Val
    7355                 7360                 7365

His Gly  Val Ala Ala Leu Glu  His His Gln Gly Arg  Val Leu His
    7370                 7375                 7380

Ala Cys  Gln His Arg Arg Val  Gly Asp Ala Leu His  Val Gln Ile
    7385                 7390                 7395

Leu Gly  Val Gly His Pro Glu  Gly Gly His Leu Ala  Gly Leu Pro
    7400                 7405                 7410

Pro His  Ala Gly His Ala Ala  Gly Leu Val Val Ala  Ile Ala Val
    7415                 7420                 7425

Gln Gly  Asp Gln His His Leu  Gly Leu Leu Gly Ala  His Ala Arg
    7430                 7435                 7440

Val His  Gly Leu His Glu Ser  Leu Gln Leu Ala Glu  Gly Leu Leu
    7445                 7450                 7455

Arg Leu  Ala Ala Leu Gly Glu  Glu Asp Pro Ala Gly  Leu Ala Arg
    7460                 7465                 7470

Glu Leu  Val Gly Gly Ala Ala  Gly Val Val His Ala  Ala Ala Arg
    7475                 7480                 7485

Val Val  Val Gly Gln Leu His  His Ala Ala Pro Pro  Ala Val Leu
    7490                 7495                 7500

Gly Asp  Leu Gly Pro Val Gly  Val Leu Leu Gln Arg  Ala Leu Pro
    7505                 7510                 7515

Val Leu  Ala Arg His Ile His  Leu Asp Ser Val Leu  Leu Leu Asp
    7520                 7525                 7530
```

```
His His  Gly Pro Val Gln Ala  Pro Gln Leu Ala Leu  Gly Phe Gly
    7535                 7540                 7545

Ala Ala  Val Gln Pro Gln Arg  Ala Ala Gly Ala Leu  Pro Val Leu
    7550                 7555                 7560

Val Gly  Asp Leu Gly Val Arg  Val His Glu Ala Leu  Gln Glu Ala
    7565                 7570                 7575

Ala His  His Arg Gly Gln Gly  Leu Val Ala Gly Glu  Gly Gln Arg
    7580                 7585                 7590

Asp Ala  Ala Val Leu Leu Val  His Ile Gln Val Ala  Asp Ala Ala
    7595                 7600                 7605

Val His  Leu Ala Leu Leu Gly  His Gln Leu Glu Gly  Gly Leu Gln
    7610                 7615                 7620

Val Ala  Leu His Ala Val Pro  Val His Gln Gln Arg  His His Phe
    7625                 7630                 7635

His Ala  Leu Leu Pro Gly Arg  Asn Asp Arg Gln Ala  Gln Gly Val
    7640                 7645                 7650

Leu His  Arg His Cys His Leu  Ser Arg Arg Arg Arg  Gly Gln Gly
    7655                 7660                 7665

Val Val  Leu Val Gln Gly Leu  Lys His Ser Leu Ala  Val Leu Leu
    7670                 7675                 7680

Asp Asp  Ala His Gly Gly Lys  Ala Glu Ala His Gly  Arg Gln Leu
    7685                 7690                 7695

Leu Leu  Gly Leu Pro Phe Val  Leu Ala Val Leu Ala  Asp Val Leu
    7700                 7705                 7710

Gln Arg  His Met Leu Gly Leu  Ala Gly Phe Leu Phe  Gly Arg Gln
    7715                 7720                 7725
```

```
Arg Arg  Arg Arg Cys Ala Gly  Arg Ala Arg Val Leu  Val His His
    7730                7735                7740

Asp Tyr  Phe Phe Phe Leu Ala  Val Val Arg Asp His  Ala Ala Val
    7745                7750                7755

Gly Met  Pro Leu Leu Gly Gln  Arg Arg Arg Arg Arg  Ala Leu Ala
    7760                7765                7770

Val Arg  Arg Ala Ala Gly Arg  Ala Pro Ser Ala Phe  Gly Gly Ala
    7775                7780                7785

Leu Leu  Ala Ala Leu Leu Leu  Thr Ser Ser Ala Ala  Gly His Cys
    7790                7795                7800

Val Leu  Leu Gly Ser Asn Asn  Lys His Gly Asp Ser  Ala Ile Val
    7805                7810                7815

Ala Asn  Ile Ala Ile Cys Pro  Arg Arg His Arg Arg  Arg Glu Pro
    7820                7825                7830

Ala Ala  Glu Lys Leu Asn Arg  Pro Ala Ala Gln Pro  His Leu Arg
    7835                7840                7845

Arg Arg  Gly Pro Arg His Ala  Arg Asp Gly Gly Ile  His Arg Asp
    7850                7855                7860

Pro Gly  Leu Arg Asp Ala Arg  Gly Ala Arg Gly Gly  Ala Gly Ser
    7865                7870                7875

Ala Leu  Phe Ser Pro Gly Arg  Glu Pro Pro Arg Ala  Ala Arg Ala
    7880                7885                7890

Gly Ser  Arg Glu Arg Ala Glu  Pro Gly Trp Ala Arg  Ala Trp Arg
    7895                7900                7905

Leu Pro  Glu Arg Gly Arg Gly  Arg Ala His Gln Ala  Ser Gly Pro
    7910                7915                7920
```

```
Pro Met  His His Arg Gln Gly  Arg Ala Ala Arg Pro  Arg Arg Gly
    7925                7930                7935

Ala Pro  Gln Arg Gly Gly Ala  Gln Pro Arg Leu Arg  Ala Gln Pro
    7940                7945                7950

Leu Leu  Ala Ala Arg Ala Pro  Gln Ala Pro Ala Gln  Arg His Leu
    7955                7960                7965

Ala Gln  Pro Ala Pro Gln Leu  Leu Pro Gly Leu Arg  Gly Ala Arg
    7970                7975                7980

Gly Pro  Gly His Leu Pro Pro  Leu Phe Gln Glu Pro  Lys Asp Pro
    7985                7990                7995

Arg Leu  Leu Pro Arg Gln Pro  His Pro Arg Arg Arg  Pro Ala Gln
    8000                8005                8010

Pro Gly  Pro Arg Arg Pro Pro  Thr Tyr His Leu Leu  Gly Arg Gly
    8015                8020                8025

Ser Gln  Asp Leu Arg Gly Ser  Gly Gln Arg Arg Asp  Ser Gly Arg
    8030                8035                8040

Glu Arg  Ser Ala Arg Lys Arg  Arg Gly Ala Ala Pro  Gln Arg Pro
    8045                8050                8055

Gly Gly  Val Gly Arg Arg Gln  Arg Ala Pro Gly Gly  Pro Gln Ala
    8060                8065                8070

His Gly  Arg Ala Asp Pro Leu  Arg Leu Pro Gly Ala  Gln Pro Ala
    8075                8080                8085

Pro Gln  Gly His Glu Arg Arg  His Gly Pro Gly Ala  His Gln Ala
    8090                8095                8100

Arg Leu  Ala Pro Leu Gly Gly  Gly Asp Ala Gly Pro  Arg Glu Phe
    8105                8110                8115
```

```
Gly Arg  Gly Gln Ala Arg Gly  Gln Arg Arg Ala Ala  Gly Ala Leu
    8120                 8125                 8130

Ala Gly  Ser Glu His Pro Pro  Glu Pro Gly Arg Ala  Ala Gln Ala
    8135                 8140                 8145

His Asp  Gly Arg Gly Pro Gly  Asp Arg Gly Ala Gly  Val Ser Ala
    8150                 8155                 8160

Pro Leu  Leu Cys Arg Arg Gly  Asp Pro Ala Gln Gly  Arg Gly Glu
    8165                 8170                 8175

Pro Ala  Leu Pro Leu Gln Ala  Arg Val Arg Ala Pro  Gly Leu Gln
    8180                 8185                 8190

Asp Leu  Gln Arg Gly Ala Asp  Gln Pro Gly Leu Leu  His Gly His
    8195                 8200                 8205

Pro Ala  Arg Glu Pro Pro Gly  Ala Lys Arg Ala Ala  His His Pro
    8210                 8215                 8220

Ala Arg  Gly Gly Pro Pro Arg  Leu His Pro Arg Leu  Arg Leu Pro
    8225                 8230                 8235

Val Pro  Leu Pro His Leu Ala  Asp Gly His Gly Arg  Val Ala Ala
    8240                 8245                 8250

Val Pro  Gly Gly Ala Glu Pro  Glu Arg Ala Leu Gln  Ala Pro Ala
    8255                 8260                 8265

Glu Glu  Pro Gln Gly Pro Val  Asp Arg Val Arg Arg  Ala Tyr His
    8270                 8275                 8280

Arg Leu  Gly Pro Gly Arg Pro  His Leu Pro Arg Ala  Pro Ala Ala
    8285                 8290                 8295

Asp Ala  Ala Gln Arg Ala Ala  Arg Leu Tyr Glu Pro  Lys His Val
    8300                 8305                 8310
```

```
Ala Lys  Leu Ser Leu Phe His  Pro Arg Thr Leu Arg  Asp Pro Ala
    8315                8320                8325

Arg His  Leu Leu Arg Ala Ala  Leu Gly Leu Arg Ala  Ala Asp Leu
    8330                8335                8340

Pro Arg  Val Pro Pro Ala Ala  Leu Glu Pro Leu Leu  Leu Ala Ala
    8345                8350                8355

Pro Gly  Gln Leu Pro Gly Leu  Pro Leu Gly Arg Asp  Arg Gly Arg
    8360                8365                8370

Gln Arg  Arg Gly Ser Ala Gly  Val Pro Leu Pro Leu  Gln Pro Leu
    8375                8380                8385

His Ala  Ala Pro Leu Pro Gly  Leu Gln Pro Pro Ala  Ala Glu Arg
    8390                8395                8400

Asp Pro  Asp His Arg His Leu  Arg Val Ala Arg Pro  Arg Arg Arg
    8405                8410                8415

Arg Gly  Gln Gly Gly Ser Glu  Thr His Pro Gly Ala  Val Asp Leu
    8420                8425                8430

Gly Leu  Leu Ala Gln Val Arg  Ala Arg Gly Leu Pro  Ser Leu Arg
    8435                8440                8445

Asp Gln  Val Leu Arg Gly Pro  Ile Pro Ala Ala Gln  Gly Arg Ala
    8450                8455                8460

Val Gly  Leu Arg His His Pro  Gly Gly His Pro Gly  Pro Ile Ala
    8465                8470                8475

Ser His  Pro Glu Ile Pro Pro  Arg Ile Ser Ala Glu  Lys Gly Pro
    8480                8485                8490

Arg Gly  Leu Leu Gly Pro Pro  Asp Arg Arg Gly Ala  Gln Pro Gln
    8495                8500                8505
```

```
Leu Pro  Pro Gly Cys Pro Glu  Glu Ala Ala Arg Ser  Lys Trp Ser
    8510                8515                8520

Cys Arg  Arg Arg Arg Ile Trp  Arg Lys Thr Gly Arg  Ala Val Arg
    8525                8530                8535

Gln Arg  Arg Arg Arg Trp Lys  Thr Gly Thr Ala Leu  Arg Gln Arg
    8540                8545                8550

Arg Thr  Ala Cys Lys Thr Val  Trp Arg Arg Lys Thr  Arg Trp Arg
    8555                8560                8565

Arg Gln  Arg Lys Lys Gln Pro  Pro Pro Asp Arg Arg  Pro Arg Arg
    8570                8575                8580

Arg Lys  Gln Ala Ala Arg Ile  Pro Ser Pro Leu Arg  Val Gly Val
    8585                8590                8595

Ala Ala  Ala Gly Pro Thr Val  Gly Gly Thr Arg Pro  Gly Ala Ser
    8600                8605                8610

Arg Thr  Pro Pro Pro Arg Pro  Val Arg Arg Ser Gly  Arg Asp Thr
    8615                8620                8625

Ser Pro  Gly Gly Gly Thr Lys  Thr Pro Ser Ser Pro  Ala Cys Lys
    8630                8635                8640

Pro Ala  Gly Ala Thr Ser Pro  Ser Pro Gly Ala Thr  Cys Ser Ser
    8645                8650                8655

Thr Ala  Gly Thr Ser Pro Ala  Thr Ser Cys Ile Thr  Thr Val Thr
    8660                8665                8670

Ser Thr  Ala Pro Thr Thr Val  Ser Lys Lys Arg Gln  Lys Pro Ser
    8675                8680                8685

Ser Ser  Arg Lys Pro Ala Ala  Ala Ala Ala Arg Lys  Ser Thr Ala
    8690                8695                8700
```

```
Ala Ala  Gly Gly Leu Arg Ile  Ala Ala Asn Glu Pro  Ala Gln Thr
    8705                 8710                 8715

Arg Glu  Leu Arg Asn Arg Ile  Phe Pro Thr Leu Tyr  Ala Ile Phe
    8720                 8725                 8730

Gln Gln  Ser Arg Gly Gln Glu  Gln Glu Leu Lys Val  Lys Asn Arg
    8735                 8740                 8745

Ser Leu  Arg Ser Leu Thr Arg  Ser Cys Leu Tyr His  Lys Ser Glu
    8750                 8755                 8760

Asp Gln  Leu Gln Arg Thr Leu  Glu Asp Ala Glu Ala  Leu Phe Asn
    8765                 8770                 8775

Lys Tyr  Cys Ala Leu Thr Leu  Lys Glu Pro Ala Pro  Ala His Thr
    8780                 8785                 8790

Arg Lys  Lys Ala Gly Ile Thr  Ser Pro Pro Ala Pro  Phe Ala Arg
    8795                 8800                 8805

Pro Ser  Ala Lys Arg Phe Pro  Arg Leu Thr Cys Gly  Ala Thr Ser
    8810                 8815                 8820

Pro Arg  Trp Ala Trp Pro Pro  Ala Pro Pro Arg Thr  Thr Pro Pro
    8825                 8830                 8835

Ala Thr  Gly Ser Val Pro Gly  Pro Arg Ser His Gly  Met Thr Ser
    8840                 8845                 8850

Ala Pro  Thr Glu Thr Arg Tyr  Ser Asn Ser Gln Arg  Ser Pro Pro
    8855                 8860                 8865

Arg Pro  Ala Ile Thr Leu Ile  Arg Val Ile Gly Pro  Pro Pro Trp
    8870                 8875                 8880

Cys Thr  Arg Lys Phe Pro Ser  Pro Arg Pro Tyr Tyr  Phe Arg Glu
    8885                 8890                 8895
```

```
Thr Pro  Arg Pro Lys Ser Ser  Leu Thr Gln Val Ser  Ser Trp Pro
    8900                 8905                 8910

Ala Ala  Pro Pro Cys Val Val  Thr Ala Pro Leu Arg  Val Ser Gly
    8915                 8920                 8925

Trp Ser  Glu Ala Glu Ala His  Ser Ser Thr Thr Arg  Trp Ala Leu
    8930                 8935                 8940

Arg Trp  Val Cys Asp Leu Thr  Glu Ser Ser Asn Ser  Pro Asp Arg
    8945                 8950                 8955

Gly Asp  Leu Pro Ser Arg Leu  Val Arg Pro Ser Leu  Trp Arg Val
    8960                 8965                 8970

Arg Pro  Arg Ser Pro Ala Arg  Ala Ala Ser Ala Leu  Ser Ser Ser
    8975                 8980                 8985

Trp Arg  Ser Ser Leu Pro Arg  Ser Thr Ser Thr Pro  Ser Pro Ala
    8990                 8995                 9000

Pro Pro  Ala Thr Thr Arg Thr  Ser Ser Ser Arg Thr  Ser Thr Pro
    9005                 9010                 9015

Ser Ala  Ser Arg Trp Thr Ala  Thr Ile Glu Cys Pro  Met Val Ala
    9020                 9025                 9030

Gln Leu  Thr Leu Gly Phe Asp  Thr Trp Thr Thr Ala  Ala Ala Ser
    9035                 9040                 9045

Ala Ala  Ser Leu Gly Ile Ser  Pro Ser Leu Pro Thr  Leu Ser Cys
    9050                 9055                 9060

Pro Arg  Ser Thr Leu Arg Ala  Gln Pro Thr Glu Cys  Gly Ser Ser
    9065                 9070                 9075

Ser Lys  Gly Ala Ser Thr Pro  Thr Cys Phe Gly Ser  Ser Ala Ser
    9080                 9085                 9090
```

```
Asp Arg  Ser Trp Ser Ser Ala  Asn Lys Asp Arg Pro  Phe Leu Leu
    9095                 9100                 9105

Cys Thr  Ala Ser Ala Thr Thr  Pro Ala Cys Met Lys  Val Phe Val
    9110                 9115                 9120

Val Cys  Cys Val Leu Ser Ile  Ile Lys Ala Glu Ile  Ser Asp Tyr
    9125                 9130                 9135

Ser Gly  Leu Asp Cys Gly Val  Pro Ala Ile Asn Arg  Ser Leu Phe
    9140                 9145                 9150

Phe Thr  Gly Asn Glu Thr Glu  Leu Gln Leu Gln Cys  Lys Pro His
    9155                 9160                 9165

Lys Lys  Tyr Leu Thr Trp Leu  Phe Gln Gly Ser Pro  Ile Ala Val
    9170                 9175                 9180

Val Asn  His Cys Asp Asn Asp  Gly Val Leu Leu Ser  Gly Pro Ala
    9185                 9190                 9195

Asn Leu  Thr Phe Ser Thr Arg  Arg Ser Lys Leu Gln  Leu Phe Gln
    9200                 9205                 9210

Pro Phe  Leu Pro Gly Thr Tyr  Gln Cys Val Ser Gly  Pro Cys His
    9215                 9220                 9225

His Thr  Phe His Leu Ile Pro  Asn Thr Thr Ala Pro  Leu Pro Ala
    9230                 9235                 9240

Thr Asn  Asn Gln Thr Thr His  Gln Arg His Arg Arg  Asp Leu Ser
    9245                 9250                 9255

Ser Glu  Ser Asn Thr Thr Thr  Gly Gly Glu Leu Arg  Gly Arg Pro
    9260                 9265                 9270

Thr Ser  Gly Ile Tyr Tyr Gly  Pro Trp Glu Val Val  Gly Leu Ile
    9275                 9280                 9285
```

```
Ala Asn  Lys Lys Asn Asn His  Leu Ile Asn Lys Asp  Thr Ile Ile
    9290                9295                9300

Leu Met  Ile Val Gln Lys Arg  Ile Thr Tyr Leu Lys  Ser Asp Thr
    9305                9310                9315

Arg Ser  Leu Ser Met Phe Ser  Ala Asn Thr Thr Ser  Leu Pro Ser
    9320                9325                9330

Ser Gln  Leu Trp Tyr Cys Arg  Pro Arg Arg Ala Ala  Asn Phe Leu
    9335                9340                9345

His Thr  Leu Lys Gly Met Ser  Asn Ser Ser Cys Pro  Ser Ile Phe
    9350                9355                9360

Ile Leu  Ser Ser Ile Arg Cys  Pro Lys Ser Ala Ser  Gly Trp Met
    9365                9370                9375

Met Thr  Ser Thr Pro Ser Thr  Pro Thr Met Gln Thr  Thr His Arg
    9380                9385                9390

Pro Cys  Pro Ser Ser Thr Pro  Pro Ser Ser Leu Gln  Met Asp Ser
    9395                9400                9405

Lys Arg  Ser Pro Trp Gly Cys  Cys Pro Cys Asp Trp  Leu Thr Pro
    9410                9415                9420

Ser Pro  Pro Arg Thr Gly Lys  Ser Pro Ser Ser Trp  Glu Arg Gly
    9425                9430                9435

Trp Thr  Ser Thr Arg Arg Glu  Asn Ser Ser Pro Thr  Arg Pro Pro
    9440                9445                9450

Arg Pro  Pro Pro Leu Ser Val  Phe Gln Thr Thr Pro  Phe Pro Leu
    9455                9460                9465

Lys Leu  Leu Pro Leu Ser Thr  Thr Thr Met Glu Leu  Ala Ser Met
    9470                9475                9480
```

```
Ser Pro  His His Gln Tyr Phe  Pro His Leu Thr Leu  Ala Val Leu
    9485                9490                9495

Glu Thr  Val Phe Arg Leu Gln  Ile Ser Cys Leu Tyr  Asn Leu Ile
    9500                9505                9510

Leu Leu  His Ser Ala Gln Ile  Ala Ser Gln Lys Gln  Thr Lys Gly
    9515                9520                9525

Tyr Ile  Leu Thr Pro Val Glu  Thr Glu Asp Leu Arg  Leu Ile Ala
    9530                9535                9540

Lys Glu  Asp Phe Leu Thr Val  Met Leu Leu Gln His  Ile Leu Glu
    9545                9550                9555

Met Ala  Thr Met Asp Leu Met  Ile Val Met Glu Lys  Gln Asp Pro
    9560                9565                9570

Leu Pro  Lys Leu Glu Gln Asp  Ile Leu Met Leu Thr  Lys Gln Leu
    9575                9580                9585

Ser Asn  Ala Gln Val Val Leu  Thr Pro Leu Val Pro  Gln Leu Glu
    9590                9595                9600

Thr Asn  Arg Met Thr Ser His  Phe Gly Leu Pro Leu  Thr Gln Ala
    9605                9610                9615

Leu Ile  Val Asn Tyr Phe Gln  Thr Glu Met Pro Asn  Leu Leu Ser
    9620                9625                9630

Val Leu  Gln Asn Ala Val Val  Lys Tyr Ala Leu Trp  Gln Trp Arg
    9635                9640                9645

Leu Leu  Leu Asp Gln His Ile  Gln Leu Met Thr Gln  Ser Lys Ala
    9650                9655                9660

Pro Phe  Ser Leu Asp Leu Ile  Pro Met Val Tyr Ser  Cys Gln Thr
    9665                9670                9675
```

```
His Gln  Trp Val Ile Thr Gly  Thr Leu Gly Arg Asp  Arg Pro Leu
    9680                 9685                 9690

Lys Val  Pro Ile Gln Met Leu  Trp Asp Ser Cys Gln  Ile Val His
    9695                 9700                 9705

Ile Gln  Lys Pro Lys Val Lys  His Leu Lys Ile Ala  Ser Val Arg
    9710                 9715                 9720

Tyr Ile  Leu Glu Lys Leu Leu  Cys Gln His Pro Leu  Ser Met Ala
    9725                 9730                 9735

Leu Met  Lys Lys Thr Gln Pro  Gln Leu Ala Pro Thr  Leu Leu Leu
    9740                 9745                 9750

His Gly  Ser Gly Leu Glu Thr  Ile Arg Thr Lys Ile  Leu Pro Leu
    9755                 9760                 9765

Leu Pro  Thr His Ser Leu Phe  Pro Thr Ser Pro Arg  Asn Asn Pro
    9770                 9775                 9780

Thr Gln  Gln Ala Asn Pro Phe  Ser His His Leu Cys  Leu Tyr Gly
    9785                 9790                 9795

Asn Ser  Glu Thr Glu Lys Ser  Ser Ser Val Leu Leu  Asn Gln Gln
    9800                 9805                 9810

Phe Tyr  Arg Thr Arg Ala Val  Ile Phe Pro Pro Pro  Ser Gln Asp
    9815                 9820                 9825

Met Glu  Tyr Thr Thr Leu Ser  Pro Arg Thr Ala Leu  Asn Ile Met
    9830                 9835                 9840

Pro Leu  Val Met Asp Met Leu  Leu Val Ser Thr Phe  His Thr Val
    9845                 9850                 9855

Ser Glu  Arg Ala Ser Leu Gly  Ser Val Arg Glu Met  Lys Pro Ser
    9860                 9865                 9870
```

```
Gly His  Ser Arg Ile Cys Thr  Ser Gln Leu Asn Ser  Gly Leu Ser
    9875                9880                9885

Ser Val  Val Gly Ile Thr Val  Ile Trp Lys Lys Gln  Lys Ser Gly
    9890                9895                9900

Gly Gly  Asn His Ser Pro Arg  Thr Gly Ser Ala Gly  Gly Val Ala
    9905                9910                9915

Ser Gly  Pro Ala Ala Val Ala  Ala Ala Ala Ala Pro  Ser Ser Cys
    9920                9925                9930

Cys Ser  Gly Gly Ser Gly Pro  Gly Thr Pro Ser Ala  Cys Pro Arg
    9935                9940                9945

Pro Ser  Ala Ser Val Val Trp  Cys Gly Gly Arg Ser  Ser Ala Cys
    9950                9955                9960

Glu Ser  Arg Ser Gly His Cys  Ser Thr Cys Asn Thr  Gly Pro Pro
    9965                9970                9975

Gly Cys  Ser Thr Val His Ser  Ser Thr Arg Ser Ser  Arg Asn Ser
    9980                9985                9990

Ser Arg  Glu Gly Cys Tyr Pro   Arg Gly Arg Arg Thr   Arg Ser Ser
    9995                10000                10005

Gly Lys   Ser Ser Gly Ala Pro   Ser Arg Arg Arg Cys   Pro Cys Thr
    10010                10015                10020

Ser Pro   Trp Ala Cys Gly Gly   Ser Pro Pro Pro Gly   Thr Thr Ser
    10025                10030                10035

Pro Ser   Gly Thr Cys Ser Pro   Gly Ser Cys Gly Thr   Thr Gly Pro
    10040                10045                10050

Ala Pro   Pro Arg Pro Pro Cys   Ser Glu Glu Thr Pro   Asp Pro Gly
    10055                10060                10065
```

```
Asn Asp   Asn Gly Gly Pro Thr   Ala Arg Thr Arg Gly   Ser Ser Gly
    10070                10075                10080

Ser Thr   Ser Leu Cys Trp His   Ser Thr Gly Ile Cys   Ser Cys Ile
    10085                10090                10095

Ser Ser   Ala Leu Ser Ala Pro   Arg Gly Ser Lys Pro   Tyr Pro Arg
    10100                10105                10110

Ala Arg   Gly Thr Leu Ala Gly   Gln Arg Thr Pro Gln   Asn Arg Ala
    10115                10120                10125

Ile Leu   Ala His Asn Leu His   Cys Ala Trp Thr Gly   Tyr Arg Asn
    10130                10135                10140

Gln Ala   Ala Pro Gly Asp Pro   Pro Pro Glu Lys Arg   Gly Ser Arg
    10145                10150                10155

Ser Pro   His Ser Val Val Arg   Gly Pro Ala Asp Thr   Gly Asp Gly
    10160                10165                10170

Gly Thr   Arg Leu Ile Val Phe   Ser Thr Val Ser Cys   Ser Cys Phe
    10175                10180                10185

Arg Thr   Phe Ser Tyr Leu Leu   Gln Asn Leu Val Arg   Ala Leu His
    10190                10195                10200

Thr Asp   Arg Arg Arg Arg Ser   Arg Arg Leu Glu Arg   Ser Val Leu
    10205                10210                10215

Lys Leu   Asn Ser His Ser Leu   Arg Pro Cys Ser Arg   Ser Arg Ala
    10220                10225                10230

Ser Gly   Val Met Lys Ile Pro   Ser Cys Leu Ile Ala   Leu Ile Thr
    10235                10240                10245

Ser Thr   Thr Val Glu Trp Ala   Arg Pro Ser Gln Met   Met Gln Phe
    10250                10255                10260
```

```
Cys Trp   Val Ser Val Thr Ala   Gly Glu Gly Arg Thr   Gly Arg Thr
    10265                 10270                 10275

Met Ile   Asn Phe Ser Lys Arg   Ser Arg Ser Thr Ser   Lys Arg Ser
    10280                 10285                 10290

Arg Arg   Trp His Leu Ser Pro   Pro Leu Cys Trp Trp   Lys Ile Thr
    10295                 10300                 10305

Ala Arg   Ser Lys Val Ile Arg   Phe Ser Arg Cys Ser   Thr Val Ala
    10310                 10315                 10320

Ser Ser   Lys Ala Ser Thr Arg   Thr Ser Arg Asn Lys   Thr Ile Ala
    10325                 10330                 10335

Lys Ala   Gly Gly Phe Ser Asn   Ser Ser Thr Ile Met   Leu His Ser
    10340                 10345                 10350

Cys Thr   Ile Pro Arg Phe Ser   Phe Phe Gln Pro Met   Ile Arg Thr
    10355                 10360                 10365

Ser Ser   Gly Lys Ser Lys Pro   Ala Met Ile Lys Ser   Ser Arg Arg
    10370                 10375                 10380

Ala Pro   Ser Thr Gly Ile Leu   Lys His Thr Leu Ile   Ile Pro Arg
    10385                 10390                 10395

Tyr Ser   Ala Pro Gly Ser Pro   Ala Ala Asp Gln Ala   Glu Tyr Gln
    10400                 10405                 10410

Asn Leu   Cys Arg Asp Pro Ala   Pro Pro Ser Ala Ile   Thr Val Ser
    10415                 10420                 10425

Thr Leu   Ser Tyr Arg Leu Arg   Asn Phe Pro Asp Pro   Gln Glu Glu
    10430                 10435                 10440

Lys Gly   Lys Pro His Tyr Arg   Thr Glu Val Pro Pro   Ser Glu His
    10445                 10450                 10455
```

```
Cys Gln   Met Asp Asn Lys His   Ala Gly Thr Arg Tyr   Leu Pro Asp
    10460                 10465                 10470

Asn Trp   Thr Glu Asn Arg Val   Ser Asn Phe Glu Asn   Gln Gln Lys
    10475                 10480                 10485

Lys Asn   Leu Pro Gly Ala Arg   Leu Gly Pro Arg Glu   Gln Arg Trp
    10490                 10495                 10500

Ser Lys   Cys Lys Gly Cys Val   Pro Ala Trp Leu Val   Ser Ser Val
    10505                 10510                 10515

Lys Lys   Gln Lys Ile Lys His   Thr Met Leu Ala Trp   Arg Thr Gly
    10520                 10525                 10530

Gly Ile   Val Leu Ser Ser Thr   Arg Gln Ala Thr Gly   Ser Pro Ala
    10535                 10540                 10545

Arg Pro   Ser Lys Leu Ser Leu   Leu Lys Thr Ile Thr   Glu Arg Arg
    10550                 10555                 10560

Ser Arg   Trp Pro Ala Met Ile   Arg Glu Glu Ala Tyr   Thr Pro Gly
    10565                 10570                 10575

Thr Leu   Glu Ser Val Ser Glu   Lys Lys Arg Pro Arg   Lys Gln Gly
    10580                 10585                 10590

Thr Thr   Thr Leu Thr Leu Lys   Ser Ser Lys Ala Met   Pro Cys Gly
    10595                 10600                 10605

Ser Thr   Lys Phe Ser Gly Ala   Lys Met Leu Leu Pro   Ser Cys Thr
    10610                 10615                 10620

Gly Ser   Glu Ala Pro Asp Pro   Ser Arg Tyr Thr Tyr   Lys Ala Ser
    10625                 10630                 10635

Ala Ser   Ile Ala Tyr Arg Ala   Ala Ala Ala Ala Ala   His Asn Arg
    10640                 10645                 10650
```

```
Arg Lys   Ser Gln Arg Lys Asp   Ala Leu Thr Cys Pro   Pro Ala Leu
    10655                10660                10665

Cys Ser   Ile Tyr Ser Pro Arg   Ser Thr Leu Thr Arg   Pro Lys Ser
    10670                10675                10680

Lys Asn   Thr Arg Gln Ile Ile   Thr His Ala Gln His   Thr Pro Arg
    10685                10690                10695

Asn Arg   His Thr Gln Lys Asn   Thr Arg Thr Ser Ser   Asn Gly Gln
    10700                10705                10710

Thr Ala   Val Ile Ser Gly Phe   Pro Arg Tyr Val Ile   Lys Thr Arg
    10715                10720                10725

Leu Ser   Asn Ser Val Asp Arg   Lys His His Pro Pro   Arg Pro Arg
    10730                10735                10740

Ser Pro   Leu Pro Gln Pro Ile   Thr Phe Leu Pro Pro   Gln Ile Gln
    10745                10750                10755

Thr Ala   His Leu His Ile Asn   Ala His Gln Lys Phe   Glu Val Tyr
    10760                10765                10770

Tyr
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<210> 11
<211> 10925
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Val Ile Trp Gly Gly Arg Lys Val Ile Gly Arg Glu Thr Gly Asp Arg
            20                  25                  30

Gly Arg Gly Gly Arg Phe Asp Asp Val Ala Val Arg Arg Ser Arg Phe
        35                  40                  45

Ala Ser Ser Arg Gly Lys Ser Asp Val Lys Arg Gly Val Val Thr Arg
    50                  55                  60

Lys Tyr Ser Ile Phe Pro Arg Ser Leu Thr Gly Asn Glu Val Phe Leu
65                  70                  75                  80

Gly Gly Cys Lys Lys Arg Ala Ile Phe Ala Arg Lys Leu Asn Glu Glu
                85                  90                  95

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

Gly Arg Val Asp Phe Asp Arg Leu Arg Gly Gly Phe Asp Tyr Arg Ile
        115                 120                 125

Phe His Leu Asn Phe Arg Val Arg Cys Gln Ser Pro Val Phe Leu Arg
    130                 135                 140

Thr Ile Ser Phe Pro Arg Lys Cys His Leu Thr Val Thr Ile Thr Val
145                 150                 155                 160

Leu Arg Arg Lys Leu Arg Ser Pro Asp Pro Leu Trp Cys Thr Leu Ser
                165                 170                 175

Thr Ile Cys Ser Asp Ala Ala Leu Ser Gln Tyr Leu Leu Pro Ala Cys
            180                 185                 190

Val Leu Glu Val Ala Glu Cys Ala Ser Lys Ile Ala Thr Thr Arg Gln
        195                 200                 205
```

```
Gly Leu Thr Asp Asn Cys Met Lys Asn Leu Leu Arg Val Arg Arg Phe
    210                 215                 220

Ala Leu Leu Arg Asp Val Arg Ala Arg Tyr Thr Arg His Leu Leu Thr
225                 230                 235                 240

Ser Met Pro Ser Thr Pro Pro Ile Asp Val Asn Asp Gly Lys Trp Pro
                245                 250                 255

Ala Trp His Tyr Ala Gln Tyr Met Thr Leu Trp Asp Phe Pro Thr Trp
            260                 265                 270

Gln Tyr Ile Tyr Val Leu Val Ile Ala Ile Thr Met Val Met Arg Phe
        275                 280                 285

Trp Gln Tyr Ile Asn Gly Arg Gly Arg Phe Asp Ser Arg Gly Phe Pro
    290                 295                 300

Ser Leu His Pro Ile Asp Val Asn Gly Ser Leu Phe Trp His Gln Asn
305                 310                 315                 320

Gln Arg Asp Phe Pro Lys Cys Arg Asn Asn Ser Ala Pro Leu Thr Gln
                325                 330                 335

Met Gly Gly Arg Arg Val Arg Trp Glu Val Tyr Ile Ser Arg Ala Arg
            340                 345                 350

Leu Val Asn Arg Gln Ile Thr Arg Ser Phe Ile Ala Val Val Tyr His
        355                 360                 365

Ser Ile Ala Asn Ala Val Ser Ala Ser Asp Thr Thr Val Ser Asn Leu
    370                 375                 380

Arg Leu Glu Tyr Leu Ile Arg Leu Thr Ile Gly Leu Arg Leu Glu Phe
385                 390                 395                 400

Asp Ala Thr Met Arg Val Met Gly Ile Leu Arg Ser Tyr Gln Gln Trp
                405                 410                 415
```

```
Trp Ile Trp Gly Ile Leu Gly Phe Trp Met Leu Met Ile Cys Asn Val
            420                 425                 430

Trp Gly Asn Leu Trp Val Thr Val Tyr Tyr Gly Val Pro Val Trp Lys
        435                 440                 445

Glu Ala Lys Thr Thr Leu Phe Cys Ala Ser Asp Ala Lys Ala His Lys
    450                 455                 460

Glu Glu Val His Asn Ile Trp Ala Thr His Ala Cys Val Pro Thr Asp
465                 470                 475                 480

Pro Asn Pro Gln Glu Ile Val Leu Lys Asn Val Thr Glu Asn Phe Asn
                485                 490                 495

Met Trp Lys Asn Asp Met Val Asp Gln Met His Glu Asp Ile Ile Ser
            500                 505                 510

Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu Cys
        515                 520                 525

Val Thr Leu Asn Cys Ser Asp Val Lys Ile Lys Gly Thr Asn Ala Thr
    530                 535                 540

Tyr Asn Asn Ala Thr Tyr Asn Asn Asn Asn Thr Ile Ser Asp Met Lys
545                 550                 555                 560

Asn Cys Ser Phe Asn Thr Thr Thr Glu Ile Thr Asp Lys Lys Lys Lys
                565                 570                 575

Glu Tyr Ala Leu Phe Tyr Lys Leu Asp Val Val Ala Leu Asp Gly Lys
            580                 585                 590

Glu Thr Asn Ser Thr Asn Ser Ser Glu Tyr Arg Leu Ile Asn Cys Asn
        595                 600                 605

Thr Ser Ala Val Thr Gln Ala Cys Pro Lys Val Ser Phe Asp Pro Ile
    610                 615                 620
```

```
Pro Ile His Tyr Cys Ala Pro Ala Gly Tyr Ala Ile Leu Lys Cys Asn
625                 630                 635                 640

Asn Lys Thr Phe Asn Gly Thr Gly Pro Cys Asn Asn Val Ser Thr Val
                645                 650                 655

Gln Cys Thr His Gly Ile Lys Pro Val Val Ser Thr Gln Leu Leu Leu
            660                 665                 670

Asn Gly Ser Leu Ala Glu Glu Glu Val Val Ile Arg Phe Glu Asn Leu
        675                 680                 685

Thr Asn Asn Ala Lys Ile Ile Ile Val His Leu Asn Glu Ser Val Glu
    690                 695                 700

Ile Asn Cys Thr Arg Pro Ser Asn Asn Thr Arg Lys Ser Val Arg Ile
705                 710                 715                 720

Gly Pro Gly Gln Thr Phe Phe Ala Thr Gly Asp Ile Ile Gly Asp Ile
                725                 730                 735

Arg Gln Ala His Cys Asn Ile Ser Arg Lys Lys Trp Asn Thr Thr Leu
            740                 745                 750

Gln Arg Val Lys Glu Lys Leu Lys Glu Lys Phe Pro Asn Lys Thr Ile
        755                 760                 765

Gln Phe Ala Pro Ser Ser Gly Gly Asp Leu Glu Ile Thr Thr His Ser
    770                 775                 780

Phe Asn Cys Arg Gly Glu Phe Phe Tyr Cys Tyr Thr Ser Asp Leu Phe
785                 790                 795                 800

Asn Ser Thr Tyr Met Ser Asn Asn Thr Gly Gly Ala Asn Ile Thr Leu
                805                 810                 815

Gln Cys Arg Ile Lys Gln Ile Ile Arg Met Trp Gln Gly Val Gly Gln
            820                 825                 830
```

```
Ala Met Tyr Ala Pro Pro Ile Ala Gly Asn Ile Thr Cys Lys Ser Asn
        835                 840                 845

Ile Thr Gly Leu Leu Leu Thr Arg Asp Gly Gly Lys Glu Lys Asn Asp
    850                 855                 860

Thr Glu Thr Phe Arg Pro Gly Gly Gly Asp Met Arg Asp Asn Trp Arg
865                 870                 875                 880

Ser Glu Leu Tyr Lys Tyr Lys Val Val Glu Ile Lys Pro Leu Gly Ile
                885                 890                 895

Ala Pro Asp Lys Ala Lys Leu Thr Val Gln Ala Arg Gln Leu Leu Ser
            900                 905                 910

Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu Ala Gln
        915                 920                 925

Gln His Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln Leu Gln Thr
    930                 935                 940

Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln Gln Leu Leu Gly
945                 950                 955                 960

Ile Trp Gly Cys Ser Gly Lys Leu Ile Cys Thr Thr Ala Val Pro Trp
                965                 970                 975

Asn Ala Ser Trp Ser Asn Lys Ser Tyr Glu Glu Ile Trp Gly Asn Met
            980                 985                 990

Thr Trp Met Gln Trp Asp Arg Glu  Ile Asn Asn Tyr Thr  Asn Thr Ile
        995                 1000                1005

Tyr Ser  Leu Leu Glu Glu Ser  Gln Asn Gln Gln Glu  Lys Asn Glu
    1010                1015                1020

Lys Asp  Leu Leu Ala Leu Asp  Ser Trp Glu Ser Leu  Trp Ser Trp
    1025                1030                1035
```

```
Phe Asn  Ile Thr Asn Trp Leu  Trp Gly Thr Ser Arg  Val Asp Pro
    1040                1045                1050

Gly Gly  Gln Thr Ala Asp Gln  Pro Arg Leu Cys Leu  Leu Val Ala
    1055                1060                1065

Ser His  Leu Leu Phe Ala Pro  Pro Pro Cys Leu Pro  Pro Trp Lys
    1070                1075                1080

Val Pro  Leu Pro Leu Ser Phe  Pro Asn Lys Met Arg  Lys Leu His
    1085                1090                1095

Arg Ile  Val Val Gly Val Ile  Leu Phe Trp Gly Val  Gly Trp Gly
    1100                1105                1110

Arg Thr  Ala Arg Gly Arg Ile  Gly Lys Thr Ile Ala  Gly Met Leu
    1115                1120                1125

Gly Met  Arg Trp Ala Leu Trp  Leu Leu Arg Arg Lys  Glu Pro Ala
    1130                1135                1140

Asp Leu  Gln Ile Ile His Leu  Cys Arg Val Arg Arg  Lys Arg Asn
    1145                1150                1155

Gly Ile  Met Gly Ile Met Gly  Leu His Ile Gly Gln  Ile Ser Ile
    1160                1165                1170

Cys Trp  Pro Pro Cys Met Pro  Arg Thr Pro Ala Arg  His Gly Pro
    1175                1180                1185

Ser Ser  Ser Thr Thr Ser Pro  Asp Ala Met Cys Thr  Trp Gly Pro
    1190                1195                1200

Ala Glu  Ala Cys Ser Cys Pro  Thr Ser Ala Thr Cys  Asn Leu Arg
    1205                1210                1215

Cys Cys  Trp Ser Pro Met Pro  Cys Pro Glu Ala Arg  Gly Cys Leu
    1220                1225                1230
```

```
Thr Met  Trp Ser Cys Gly Lys  Phe Asp Met Met Asn  Pro Arg Pro
    1235                1240                1245

Gly Ala  Gly Pro Ala Asn Ala  Glu Ala Ser Thr Pro  Gly Phe Ser
    1250                1255                1260

Pro Cys  Val Trp Arg Arg Arg  Thr Cys Asp Pro Ile  Ile Trp Cys
    1265                1270                1275

Cys Pro  Ala Thr Gly Arg Ser  Ser Ala Pro Ala Gly  Lys Asn Leu
    1280                1285                1290

Thr Arg  Val Ser Ser Val Trp  Gly Arg Trp Arg Ala  Cys Met Arg
    1295                1300                1305

Gly Arg  Met Thr Lys Ile Cys  Val Phe Leu Cys Val  Ala Ala Ala
    1310                1315                1320

Ala Glu  Ala Pro Pro Leu Arg  Glu Gly Tyr Ser Ala  Leu Ile Arg
    1325                1330                1335

Gly Val  Ser Pro Pro Gly Arg  Glu Cys Val Arg Met  Trp Asp Pro
    1340                1345                1350

Arg Trp  Thr Ala Gly Pro Cys  Ser Pro Arg Thr Leu  Gln Pro Pro
    1355                1360                1365

Thr Arg  Pro Ala Pro Arg Pro  Trp Thr Gln Leu Pro  Pro Gln Leu
    1370                1375                1380

Leu Leu  Pro Pro Pro Ala Pro  Cys Ala Glu Trp Pro  Trp Ala Pro
    1385                1390                1395

Ala Thr  Thr Ala Leu Trp Trp  Pro Thr Arg Leu Pro  Pro Ile Ile
    1400                1405                1410

Pro Pro  Ala Thr Arg Arg Ser  Cys Cys Cys Trp Pro  Ser Ser Arg
    1415                1420                1425
```

```
Pro Pro  Ser Ala Trp Ala Ser  Pro Ser Arg Trp Leu  Ser Cys Arg
    1430                1435                1440

Arg Arg  Arg Gly Pro Arg Leu  Pro Arg Lys Pro Asn  Lys Lys Ile
    1445                1450                1455

Asn Lys  Thr Glu Thr Val Val  Asp Phe Asn Thr Glu  Ser Ile Phe
    1460                1465                1470

Ile Phe  Phe Ala Arg Gly Arg  Pro Trp Thr Thr Gly  Leu Asp His
    1475                1480                1485

Ala Pro  Gly Gly Phe Phe Pro  Gly Pro Gly Arg Gly  Gly Leu Gly
    1490                1495                1500

Cys Gly  Thr Trp Ala Ala Arg  Pro Gly Gly Gly Gly  Ser Ser Ile
    1505                1510                1515

Ala Gly  Pro Arg Ala Arg Gly  Trp Cys Cys Lys Ser  Pro Ser His
    1520                1525                1530

Ser Arg  Gly Ala Gly Arg Gly  Ala Ala Arg Cys Pro  Gly Gly Asp
    1535                1540                1545

Trp Pro  Arg Ala Ala Pro Trp  Cys Arg Cys Arg Thr  Cys Ala Gly
    1550                1555                1560

Arg Asp  Ala Cys Gly Gly Arg  Asp Ala Ser Trp Pro  Gly Ser Asp
    1565                1570                1575

Trp Arg  Cys Ser Arg Pro Asp  Pro Ala Gly Gly Ser  Cys Cys Ala
    1580                1585                1590

Gly Pro  Pro Ala Arg Cys Ile  Arg Arg Thr Trp Gly  Ile Cys His
    1595                1600                1605

Ala Thr  Trp Lys Gly Arg Arg  Glu Arg Ile Trp Arg  Arg Pro Cys
    1610                1615                1620
```

```
Asp Arg  Pro Gly Phe Pro Cys  Thr His Pro Trp Arg  Trp Ala Arg
    1625                1630                1635

Gly Arg  Arg Pro Gly Gln Arg  Arg Phe Gly Gly Arg  Thr His Arg
    1640                1645                1650

Ser Cys  Gly Pro Gly Ala Arg  His Arg Pro Phe Ile  Trp Gly Gly
    1655                1660                1665

Gly Cys  Pro Thr Gly Gly Arg  Arg Cys Pro Arg Ser  Arg Gly Arg
    1670                1675                1680

Ser Cys  Pro Arg Arg Ser Ala  Ser Pro Arg Pro Ala  Arg Arg Gly
    1685                1690                1695

Gly Ser  Cys Pro Pro Ala Gly  Arg Lys Lys Arg Phe  Pro Gly Arg
    1700                1705                1710

Gly Arg  Ala Gly Pro Lys Ala  Gly Ser Gly Ala Ala  Gly Thr Cys
    1715                1720                1725

Arg Ser  Arg Trp Gly Arg Arg  Pro Arg Pro Ala Ala  Gly Gly Ser
    1730                1735                1740

Gly Arg  Asp Ser Cys Arg Pro  Arg Gly Gly Gly Gly  Pro Pro Arg
    1745                1750                1755

Ser Ser  Ser Arg Ala His Ala  Cys Ser Arg Ala Arg  Val Pro Pro
    1760                1765                1770

Gly Gly  Ala Arg Pro Pro Ala  Arg Gly Ala Leu Ala  Ala Arg Arg
    1775                1780                1785

Ser Phe  Ser Ala Ala Xaa Arg  Arg Pro Trp Ala Phe  Trp Arg Gly
    1790                1795                1800

Ser Val  Ala Arg Val Pro Asp  Gly Pro Arg Ala Arg  Cys Ala Leu
    1805                1810                1815
```

```
Gly His  Leu Asp Pro Ala Asp  Leu Leu Val Ser Arg  Val Gly Ala
    1820                1825                1830

Thr Ala  Gly Val Gly His Gln  Ala Met Gly Val Gln  Arg Gly Gln
    1835                1840                1845

Gly Pro  Val Leu Pro Gly Ser  Gln Gly Pro Arg Gln  Arg Gly Leu
    1850                1855                1860

Arg His  Gly Glu Gly Val Arg  Ala Gly Leu Gly Ala  Cys Glu Gly
    1865                1870                1875

Ala Leu  Gln Ala His Pro Ala  Gly Arg Glu Pro Leu  Pro Val Gly
    1880                1885                1890

Ala Leu  Arg Val Gly Gln Val  Ala Ile Glu His Glu  Phe Val Val
    1895                1900                1905

Glu Arg  Leu Gly Arg Val Ala  Leu Gly Ala Glu Leu  Thr Phe Gly
    1910                1915                1920

Ser Val  Ser Ala Asp Gly Thr  Glu Glu Gly Leu Glu  Gly Val Glu
    1925                1930                1935

Leu Gly  Gly Glu Glu Asp Gly  Leu Gly Gly Val Gly  Val Arg Ala
    1940                1945                1950

Ala Ala  Gly Ala Asp Gly Leu  Ala Leu His Glu Pro  Gly Glu Val
    1955                1960                1965

Gly Pro  Val Gly Val Lys Asn  Glu Val Ser Ser Val  Leu Phe Asp
    1970                1975                1980

Ala Phe  Leu Thr Ser Gly Leu  His Glu Leu Val Ser  Pro Leu Gly
    1985                1990                1995

Asp Lys  Glu Ala Val Arg Val  Pro Val Asp Arg Leu  Tyr Gly Pro
    2000                2005                2010
```

```
Val Leu  Glu Arg Gly Ala Ala  Val Leu Val Val Glu  Glu Pro Arg
    2015                2020                2025

Pro Leu  Arg Asp Glu Gly Pro  Gly Pro Gly Gln His  Glu Gly Gly
    2030                2035                2040

His Val  Gly Gly Val Ala Val  Val Val His Gln Arg  Val His Leu
    2045                2050                2055

Leu Gln  Gly Met Gln Ala His  Val Pro Leu Val His  Ile Gln Glu
    2060                2065                2070

Gly Asp  Trp Leu Val Ser Val  Gly His Val Thr Gly  Gly Pro Gly
    2075                2080                2085

Arg Gly  Gly Ile Lys Gly Gly  Gly Pro Leu Leu Val  Leu Thr Val
    2090                2095                2100

Phe Arg  Ile Ala Val Gln Glu  Arg Gln Leu Leu Gly  Val Phe Pro
    2105                2110                2115

Leu Glu  Gly Trp His Asn Leu  Gly Thr Gln Val Val  Ser Phe Lys
    2120                2125                2130

Arg Gly  Gly Phe Asp Ile Asp  Gly Ala Val Gly Asp  Ala Phe His
    2135                2140                2145

Glu Pro  Leu Val His Leu Val  Arg Lys Asp Asp Leu  Phe Val Val
    2150                2155                2160

Glu Leu  Gly Gly Glu Gly Ala  Val Glu Gly Val Gly  Glu Glu Leu
    2165                2170                2175

Gly Asp  Gly Ala His Gly Leu  Val Leu Phe Leu Val  Gly Ala Leu
    2180                2185                2190

Leu Gly  Gly Asp Val Glu Leu  His Val Leu Ala Arg  His Ala Leu
    2195                2200                2205
```

```
Pro Phe  Gly Glu Asp Gly Gly  Glu Leu Val Gly His  Asp Ser Asp
    2210                2215                2220

Pro Pro  Ala Ala Val Val Gln  Gly Asp Glu Val His  Ala Gly Gly
    2225                2230                2235

His Leu  Ala Ala Gln Gly Leu  Val Gly Pro Ala Glu  Ala Pro Ala
    2240                2245                2250

Leu Ala  Arg Ala Glu Gly Gly  Gln Arg Val Gln His  Glu Leu Val
    2255                2260                2265

Gly Gly  Val Gly Val His Gly  Glu Asp Ala Gly Gln  Lys Leu Gly
    2270                2275                2280

Val Glu  Val Ala Asp Ala Gly  Val Gln Ile Val Gln  Arg Arg Leu
    2285                2290                2295

Pro Val  Ala His Gly Gln Arg  Ala Leu Val Gly Ala  Glu Gly Arg
    2300                2305                2310

Ala Pro  Gly His Gly Val Arg  Glu Arg Gly Gly Val  His Ala Ala
    2315                2320                2325

Asp Val  Val Asp Val Glu Gly  Leu Leu Glu Asp Ala  Asp Val Gly
    2330                2335                2340

Gly Val  Ala Ala Pro Pro Ala  Asp Ala Gly Ala His  Val Val Val
    2345                2350                2355

Gln Leu  Val Arg Gly Arg Glu  Glu Pro Arg Ala Glu  Val Gly Ala
    2360                2365                2370

Leu Arg  Leu Phe Gly Ala Val  Asp Asp Leu Ala Glu  Asp Gly Val
    2375                2380                2385

Gly Val  Gly Gly Asp Gly Gly  Pro Leu Glu Asp Val  Glu Val Gly
    2390                2395                2400
```

```
Val Gly  Gln Ala Asp Arg Val  Pro Asp Glu Val Gly  Val Gly Val
    2405                 2410                 2415

Leu Gln  Leu Gly Asp Glu Leu  Gly Gly Asp Glu Asp  Val Gln Gly
    2420                 2425                 2430

Ala Val  Val Glu Gly Leu Leu  Asp Asp Val Val Leu  Glu Leu Ala
    2435                 2440                 2445

Leu Leu  Leu Pro Gln Leu Ala  Val Glu Lys Glu Leu  Phe Ala Val
    2450                 2455                 2460

Leu Pro  Val Leu Phe Glu Gly  Glu Pro Val Leu Ile  Gly Thr Val
    2465                 2470                 2475

Arg Ala  His His Val Glu Leu  Val Asp Gly Leu Val  Gly Ala Ala
    2480                 2485                 2490

Ala Leu  Leu His Gly Glu Gly  Val Ser Leu Cys Gly  Leu Ala Gln
    2495                 2500                 2505

Gly Gly  Val Gly Glu Gly Glu  Gly Val Ala His His  Asp Leu Glu
    2510                 2515                 2520

Glu Leu  Val Leu Glu Val Glu  Val Val Ala Ala Ala  Leu Leu Pro
    2525                 2530                 2535

Glu Leu  Glu Val Arg Ala Leu  Leu Val Gly Gly Val  Gly Gln Ser
    2540                 2545                 2550

Glu Ser  Asn Ile Val Glu Glu  Asp Leu Ala Arg Ala  Gly His Glu
    2555                 2560                 2565

Val Ala  Ser Asp Ala Glu Arg  Leu Gly His Leu Gly  Pro Val Val
    2570                 2575                 2580

Asp Asp  Leu Gly Gly Glu Asp  Asp Leu Val Glu Ala  Val Asp Val
    2585                 2590                 2595
```

```
Val Pro  Asp Asp Val Glu Phe  His Glu Ser Arg Ala  Ala Leu Asn
    2600                2605                2610

Val Gly  Gln Leu Leu Glu Leu  Val Val Gly Glu Leu  Gly Gly Val
    2615                2620                2625

Ala Glu  Pro Val Leu Leu Glu  Gly Pro Val Gly Asp  Val Gly Val
    2630                2635                2640

Gly Ala  Glu Glu Gly Ser Pro  Glu Ile His Gly Gln  Gly Gly Leu
    2645                2650                2655

Gln Ala  Val Pro Val Leu Thr  Glu Leu Leu Ala His  Gly His Phe
    2660                2665                2670

Phe Gly  Gly Asp Ala Val Glu  Gly Ala Gly Val Ala  Val Pro Ala
    2675                2680                2685

Val Pro  Leu Glu Leu Glu Gly  Glu Val Val Gly Glu  Leu Asp Glu
    2690                2695                2700

Arg Arg  Val Pro Gly Glu Phe  His Asp Gln His Glu  Gly Asp Glu
    2705                2710                2715

Leu Leu  Ala Glu Gly Pro His  Pro Gly Val Gly Phe  His Ile Val
    2720                2725                2730

Gly Glu  Glu Glu Pro Phe Gly  Ala Arg Met Arg Ala  Asp Gly Glu
    2735                2740                2745

Glu Leu  Asp Leu Leu Pro Pro  Val Gly Gly Met Ala  Val Asp Val
    2750                2755                2760

Met Glu  Val Glu Met Pro Thr  Ala Arg Arg Ala Leu  Val Leu Val
    2765                2770                2775

Phe Ile  Gln Ala Ser Ala Val  Leu Ala Thr Leu His  Gly Met His
    2780                2785                2790
```

```
Val Leu  His Glu Leu Tyr Leu  Gly Ser Phe Asp Glu  Glu Phe Gln
    2795                2800                2805

Trp Ala  Val Glu Arg Trp Arg  Leu His Leu Val Leu  Tyr Tyr Val
    2810                2815                2820

Leu Ala  Ile Gly Val Ala Ile  Val Cys Leu Asp Gly  Gly His Ala
    2825                2830                2835

Asp Glu  Pro Ala Arg Glu Ala  Gly Pro Asp Phe Gly  Ser Asp Gly
    2840                2845                2850

Ser Glu  Ser Glu Asp Glu Gly  Ala Gln Ala Gly Ala  Val Gln Gly
    2855                2860                2865

Pro Glu  Thr Leu Arg Ser Gln  Val Ser Gly Gln Arg  Arg Arg Ala
    2870                2875                2880

Val Asp  Leu Gln Glu Leu Phe  Gln Gly Ala Arg Glu  Val Gln Met
    2885                2890                2895

Val Leu  Asp Leu His Gly Ala  Val Gly Gly Asp Val  His Gly Leu
    2900                2905                2910

Gln Gly  Pro Val Pro Leu Gly  Arg His His Arg Ala  Pro Phe Leu
    2915                2920                2925

Leu Gly  Arg Cys Phe His Ala  Gly Gln Lys Arg Arg  Arg Gly Arg
    2930                2935                2940

Ala Pro  Gly Gly Arg Gly Gly  Ser Gly Pro Gly Gly  Arg Gly Gly
    2945                2950                2955

Arg Gly  Thr Ser Ala Pro Arg  Ala Gly Arg Phe Trp  Tyr Cys Ala
    2960                2965                2970

Arg Arg  Arg Leu Ala Ala Thr  Thr Arg Arg Leu Thr  Ser Trp Ile
    2975                2980                2985
```

```
Arg Leu  Trp Val Lys Ala Thr  Gly Pro Val Ser Leu  Asn Leu Lys
    2990                 2995                 3000

Glu Ser  Ser Thr Glu Ser Ile  Ser Val Ser Leu Thr  Ala Ala Cys
    3005                 3010                 3015

Arg Arg  Ile Ser Cys Thr Ser  Pro Glu Leu Ser Trp  Ala Ile Ser
    3020                 3025                 3030

Val Met  Asn Cys Ser Ile Ser  Ser Ser Arg Ser Pro  Arg Pro Ala
    3035                 3040                 3045

Arg Ser  Thr Val Ala Ala Arg  Ser Leu Glu Met Arg  Pro Met Ser
    3050                 3055                 3060

Cys Glu  Lys Ala Phe Met Pro  Ala Ser Phe Gln Thr  Arg Leu Thr
    3065                 3070                 3075

Thr Ala  Pro Ser Gly Ser Arg  Ala Arg Met Thr Thr  Trp Ala Arg
    3080                 3085                 3090

Leu Ser  Ser Thr Trp Arg Val  Lys Thr Ala Leu Gln  Arg Arg Trp
    3095                 3100                 3105

Arg Leu  Ser Val Val Ala Met  Cys Ser Val Thr Lys  Lys Tyr Met
    3110                 3115                 3120

Ile Gln  Arg Arg Ser Gly Ile  Ser Leu Thr Ser Pro  Arg Ala Ser
    3125                 3130                 3135

Lys Arg  Ser Met Ala Ser Lys  Ser Thr Ala Lys Leu  Lys Asn Trp
    3140                 3145                 3150

Glu Leu  Arg Ala Glu Thr Val  Asn Ser Ser Ser Arg  Arg Arg Met
    3155                 3160                 3165

Ser Ser  Ala Met Val Ala Arg  Thr Ser Arg Ser Lys  Ala Pro Gly
    3170                 3175                 3180
```

```
Gly Ser  Ser Ser Ser Ile Ser  Ser Ser Ser Thr Asn  Ile Ser Ser
    3185                3190                3195

Thr Ser  Ser Ser Gly Gly Gly  Gly Gly Gly Gly Ala  Leu Arg Arg
    3200                3205                3210

Arg Arg  Arg Thr Gly Arg Arg  Ser Met Lys Arg Ser  Met Val Ser
    3215                3220                3225

Pro Arg  Arg Arg Arg Met Val  Ser Val Thr Ala Arg  Pro Ser Ser
    3230                3235                3240

Arg Gly  Arg Ser Val Lys Thr  Pro Pro Arg Ile Ser  Arg Trp Pro
    3245                3250                3255

Pro Gly  Gly Ser Pro Leu Gly  Arg Glu Arg Ala Leu  Thr Met His
    3260                3265                3270

Leu Ile  Asn Trp Pro Val Gly  Thr Pro Arg Lys Asp  Leu Ser Val
    3275                3280                3285

Ser Arg  Ser Thr Gly Ser Glu  Asn Arg Thr Lys Ala  Ser Ser Gln
    3290                3295                3300

Ser Gln  Ser Gln Gly Arg Leu  Ser Pro Val Ser Cys  Ser Ser Gly
    3305                3310                3315

Ile Ser  Gly Gly Gly Arg Ala  Met Leu Leu Val Met  Lys Leu Lys
    3320                3325                3330

Ala Val  Leu Arg Arg Arg Met  Val Ala Arg Ser Thr  Arg Ser Leu
    3335                3340                3345

Gly Pro  Ala Cys Trp Met Arg  Arg Arg Ser Ala Met  Pro Gln Ala
    3350                3355                3360

Trp Ser  His Leu Ala Arg Ser  Leu Ser Cys Met Ser  Arg Ser Thr
    3365                3370                3375
```

```
Gly Thr  Ser Ser Ser Pro Ala  Arg Pro Cys Met Arg  Val Ser Pro
    3380                 3385                 3390

Asn Pro  Arg Trp Gly Trp Thr  Ser Ala Arg Ser Ala  Thr Thr Arg
    3395                 3400                 3405

Ser Ala  Arg Met Ala Cys Cys  Ile Trp Val Arg Val  Val Trp Lys
    3410                 3415                 3420

Ser Ser  Lys Ser Thr Lys Arg  Trp Ala Pro Val Leu  Met Val Glu
    3425                 3430                 3435

Gln Leu  Ala Met Thr Asp Gln  Leu Thr Val Trp Trp  Pro Gly Arg
    3440                 3445                 3450

Thr Ser  Ser Trp Tyr Leu Arg  Arg Glu Ala Arg Val  Ser Lys Met
    3455                 3460                 3465

Ser Leu  Gln Val Arg Thr Arg  Tyr Trp Tyr Pro Thr  Arg Lys Cys
    3470                 3475                 3480

Gly Gly  Gly Trp Arg Ser Gly  His Arg Ser Val Ala  Gly Ala Pro
    3485                 3490                 3495

Gly Ala  Arg Ser Ser Ser Met  Arg Arg Trp Pro Met  Tyr Leu Asp
    3500                 3505                 3510

Ile Gln  Val Met Pro Ala Ala  Val Val Glu Ala Arg  Gly Asn Ser
    3515                 3520                 3525

Arg Thr  Arg Phe Gln Met Leu  Arg Ser Gly Arg Lys  Phe Met Val
    3530                 3535                 3540

Ala Ala  Val Trp Pro Val Arg  Arg Ala Gln Ser Trp  Met Leu Thr
    3545                 3550                 3555

Tyr Gly  Gln Lys Arg Lys Arg  Ser Ala Ala Arg Leu  Arg Gly Leu
    3560                 3565                 3570
```

```
Glu Ala  Lys Arg Thr Gly Trp  Ala Ala Arg Val Pro  Arg Phe Glu
    3575                3580                3585

Ser Arg  Ile Arg Leu Glu Pro  Gln Leu Thr Trp Tyr  Trp His Ser
    3590                3595                3600

Arg Leu  Asp Pro Ser Leu Leu  Thr Lys Pro Pro Gly  Tyr Gly Gly
    3605                3610                3615

Gly Ser  Phe Phe Gly Leu Gly  Arg Trp Ser Lys Thr  Ser Lys Arg
    3620                3625                3630

Gly Lys  Arg Pro Pro Ala Met  Ala Arg Cys Arg Ser  Leu Glu Lys
    3635                3640                3645

Glu Ser  Pro Gly Leu Arg Cys  Gly Val Pro Arg Phe  Glu Pro Gln
    3650                3655                3660

Arg Ser  Ala Pro Ala Gly Phe  Arg Gly Arg Gly Arg  Gly Cys Pro
    3665                3670                3675

Val Val  Ser Lys Thr Pro Pro  Ala Asp Phe Ser Ser  Tyr Gly Ala
    3680                3685                3690

Ser Pro  Ser Phe Ser Cys Val  Phe Ala Arg Cys Ile  Pro Tyr Cys
    3695                3700                3705

Gly Arg  Cys Ala Pro Thr Leu  His Leu Asn Arg Pro  Tyr Arg Arg
    3710                3715                3720

Ser Ser  Ser Asn Ser Arg Arg  Phe Cys Pro Arg Pro  Ser Ser Ser
    3725                3730                3735

Gln Pro  Leu Pro Arg Arg Pro  Pro Ala Glu Pro Ala  Phe Ser Met
    3740                3745                3750

Thr Trp  Pro Trp Lys Arg Ala  Arg Gly Trp Arg Gly  Trp Gly Arg
    3755                3760                3765
```

```
Arg Arg  Arg Ser Gly Thr Arg  Ala Cys Arg Lys Gly  Thr Leu Ala
    3770                3775                3780

Arg Pro  Thr Cys Pro Ser Arg  Thr Cys Ser Glu Thr  Gly Ala Ala
    3785                3790                3795

Arg Ser  Pro Arg Arg Cys Ala  Pro Pro Ala Ser Thr  Arg Gly Gly
    3800                3805                3810

Ser Cys  Gly Ala Ala Trp Thr  Glu Ser Gly Cys Gly  Thr Arg Ile
    3815                3820                3825

Ser Arg  Arg Thr Ser Arg Gly  Ser Ala Pro Arg Ala  Arg Thr Trp
    3830                3835                3840

Pro Arg  Pro Thr Trp Ser Arg  Arg Thr Ser Arg Pro  Arg Arg Arg
    3845                3850                3855

Ala Thr  Ser Lys Asn Pro Ser  Thr Thr Thr Cys Ala  Arg Ser Arg
    3860                3865                3870

Ala Arg  Arg Pro Trp Ala Cys  Thr Cys Gly Thr Cys  Trp Arg Pro
    3875                3880                3885

Ser Cys  Arg Thr Pro Arg Ala  Ser Arg Arg Arg Ser  Cys Phe Trp
    3890                3895                3900

Trp Cys  Ser Thr Val Gly Thr  Thr Arg Arg Ser Gly  Arg Arg Cys
    3905                3910                3915

Ile Ser  Pro Ser Pro Arg Ala  Ala Gly Ser Trp Thr  Trp Thr Phe
    3920                3925                3930

Cys Arg  Ala Ser Trp Cys Arg  Ser Ala Gly Cys Arg  Cys Pro Arg
    3935                3940                3945

Ser Trp  Arg Leu Ser Thr Ser  Arg Cys Ala Trp Ala  Ser Thr Thr
    3950                3955                3960
```

```
Leu Gly  Arg Ser Thr Arg Pro  Arg Thr Cys Pro Thr  Arg Arg Arg
    3965                 3970                 3975

Ser Thr  Gly Phe Thr Cys Ala  Pro Lys Cys Pro Ala  Thr Ile Trp
    3980                 3985                 3990

Gly Cys  Thr Ala Thr Thr Gly  Cys Thr Ala Arg Ala  Pro Ala Ala
    3995                 4000                 4005

Gly Ala  Ser Ala Thr Arg Ser  Cys Thr Ala Cys Ser  Gly Pro Pro
    4010                 4015                 4020

Gly Pro  Gly Pro Arg Gly Arg  Ala Thr Leu Thr Trp  Ala Arg Thr
    4025                 4030                 4035

Cys Ala  Gly Ser Pro Ala Ala  Gly Pro Trp Lys Leu  Pro Ala Val
    4040                 4045                 4050

Pro Pro  Thr Trp Arg Arg Trp  Thr Met Arg Arg Arg  Arg Ala Ser
    4055                 4060                 4065

Thr Trp  Lys Thr Asp Gly Ala  Thr Val Phe Leu Leu  Asp Ala Ala
    4070                 4075                 4080

Thr Ala  Thr Ala Ser Ser Arg  Asp Ala Gly Gly Ala  Ala Glu Pro
    4085                 4090                 4095

Ala Val  Arg His Leu Leu Gly  Arg Leu Asp Pro Gly  His Ala Thr
    4100                 4105                 4110

His His  Gly Ala Asp Asp Pro  Gln Ser Arg Ser Leu  Thr Ala Ala
    4115                 4120                 4125

Ser Gly  Gln Pro Ala Leu Gly  His Pro Gly Gly Arg  Gly Ala Leu
    4130                 4135                 4140

Ala Leu  Glu Pro His Ala Arg  Glu Gly Ala Gly His  Arg Glu Arg
    4145                 4150                 4155
```

```
Ala Gly  Gly Glu Gln Gly His  Pro Arg Arg Arg Gly  Arg Ala Gly
    4160                4165                4170

Val Gln  Arg Ala Ala Gly Ala  Arg Gly Pro Leu Gln  Gln His Gln
    4175                4180                4185

Arg Ala  Asp Glu Pro Gly Pro  His Gly Asp Arg Arg  Ala Arg Gly
    4190                4195                4200

Gly Val  Ala Ala Arg Ala Val  Pro Pro Arg Val Glu  Pro Gly Leu
    4205                4210                4215

His Gly  Gly Ala Glu Arg Leu  Pro Glu His Ala Ala  Arg Gln Arg
    4220                4225                4230

Ala Pro  Gly Pro Gly Gly Leu  His Gln Leu His Gln  Arg Ala Ala
    4235                4240                4245

Ala Asp  Gly Gly Arg Gly Ala  Pro Glu Arg Gly Val  Pro Val Gly
    4250                4255                4260

Ala Gly  Leu Leu Leu Pro Asp  Gln Ser Pro Gly Leu  Ala Asp Arg
    4265                4270                4275

Glu Pro  Glu Pro Gly Phe Gln  Glu Leu Ala Gly Thr  Val Gly Arg
    4280                4285                4290

Ala Gly  Pro Gly Arg Gly Pro  Arg Asp Gly Val Glu  Pro Ala Asp
    4295                4300                4305

Ala Glu  Leu Ala Pro Ala Ala  Ala Ala Gly Gly Ala  Leu His Gly
    4310                4315                4320

Gln Arg  Gln Arg Glu Pro Arg  Leu Val Pro Gly Leu  Pro Ala Pro
    4325                4330                4335

Val Pro  Arg Gly His Arg Ala  Gly Ala Arg Gly Arg  Ala Asp Leu
    4340                4345                4350
```

```
Pro Gly  Asp His Pro Arg Glu  Pro Arg Ala Gly Pro  Gly Gly Pro
    4355                4360                4365

Gly Gln  Pro Gly Gly His Pro  Glu Leu Pro Ala Asp  Gln Pro Val
    4370                4375                4380

Ala Glu  Asp Pro Ala Pro Val  Arg Ala Glu His Arg  Gly Gly Ala
    4385                4390                4395

His Pro  Ala Leu Arg Ala Ala  Glu Arg Gly Ala Val  Pro Asp Ala
    4400                4405                4410

Gly Gly  Gly His Ala Gln Arg  Arg Ala Arg His Asp  Arg Ala Gln
    4415                4420                4425

His Gly  Ala Gln His Val Arg  Ser Gln Pro Pro Val  His Gln Ala
    4430                4435                4440

Asp Gly  Leu Leu Ala Ser Gly  Gly Arg His Glu Leu  Gly Leu Leu
    4445                4450                4455

Tyr Gln  Arg His Leu Glu Pro  Ala Leu Ala Pro Ala  Ala Arg Val
    4460                4465                4470

Leu His  Gly Arg Val Arg His  Ala Arg Pro Gln Arg  Arg Val Pro
    4475                4480                4485

Val Gly  Arg Arg Gly Gln Gln  Arg Val Leu Ala Ala  Pro Arg His
    4490                4495                4500

His Arg  Val Glu Glu Arg Gly  Arg Gly Pro Ala Ala  Val Leu Gly
    4505                4510                4515

Ala Val  Arg Ser Arg Gly Cys  Cys Arg Gly Gly Ala  Gly Arg Gln
    4520                4525                4530

Pro Leu  Pro Glu Pro Ala Leu  Phe Ala Glu Gln Arg  Ala Gln Gln
    4535                4540                4545
```

```
Arg Ala  Gly Ser Ala Asp Ala  Ala Ala Pro Ala Gly  Arg Gly Gly
    4550                 4555                 4560

Val Pro  Glu Arg Leu Leu Val  Glu Ala Arg Ala Arg  Glu Glu Leu
    4565                 4570                 4575

Pro Gln  Arg Asp Arg Glu Pro  Gly Gly Gln Asp Glu  Pro Leu Glu
    4580                 4585                 4590

Asp Val  Arg Ala Arg Ala Gln  Gly Arg Ala Pro Ser  Gln Gln Arg
    4595                 4600                 4605

Arg His  Pro Thr Pro Ala Thr  Arg Gln Ala Ala Gly  Ser Gly Val
    4610                 4615                 4620

Gly Arg  Gly Phe Arg Arg Arg  Gln Gln Arg Val Gly  Leu Gly Trp
    4625                 4630                 4635

Glu Trp  Trp Trp Pro Val Arg  Ser Leu Ala Pro Pro  Tyr Arg Ala
    4640                 4645                 4650

Pro Asp  Val Arg Ile Lys Asn  Lys Lys Arg Tyr Ser  Pro Arg Pro
    4655                 4660                 4665

Trp Arg  Pro Ala Cys Val Leu  Leu Cys Cys Leu Tyr  Asp Glu Ala
    4670                 4675                 4680

Arg Val  Pro Gly Gly Ser Ser  Ser Leu Val Arg Glu  Arg Asp Ala
    4685                 4690                 4695

Ala Gly  Gly Gly Gly Gly Asp  Ala Ala Pro Ala Gly  Gly Ala Leu
    4700                 4705                 4710

Arg Ala  Pro Ala Val Pro Gly  Ala Tyr Gly Gly Ala  Glu Gln His
    4715                 4720                 4725

Ser Leu  Leu Gly Ala Gly Thr  Leu Val Arg Tyr His  Pro Val Val
    4730                 4735                 4740
```

```
Pro Gly  Gly Gln Gln Val Gly  Gly His Arg Leu Ala  Glu Leu Pro
    4745                4750                4755

Glu Arg  Pro Gln Gln Leu Pro  Asp His Arg Gly Ala  Glu Gln Arg
    4760                4765                4770

Phe His  Pro His Gly Gly Gln  His Pro Asp His Gln  Leu Arg Ala
    4775                4780                4785

Leu Ala  Val Gly Arg Pro Ala  Glu Asn His His Ala  His Gln His
    4790                4795                4800

Ala Gln  Arg Glu Arg Val His  Val Gln Gln Gln Val  Gln Gly Ala
    4805                4810                4815

Gly Asp  Gly Leu Ala Gln Asp  Pro Gln Trp Gly Arg  Gly Gly Glu
    4820                4825                4830

Leu Trp  Ser Gly Arg Ala Asp  Leu Arg Val Gly Gly  Val Ala Ala
    4835                4840                4845

Arg Gly  Gln Leu Leu Gly Asp  His Asp His Arg Ser  Asp Glu Gln
    4850                4855                4860

Arg His  His Arg Gln Leu Leu  Gly Gly Gly Ala Ser  Glu Arg Gly
    4865                4870                4875

Ala Gly  Glu Arg His Arg Arg  Glu Val Arg His Ala  Gln Leu Pro
    4880                4885                4890

Ala Gly  Leu Gly Pro Arg Asp  Arg Ala Gly Asp Ala  Gly Arg Val
    4895                4900                4905

His Gln  Arg Gly Leu Pro Pro  Arg His Arg Pro Ala  Ala Arg Leu
    4910                4915                4920

Arg Arg  Gly Leu His Arg Glu  Pro Pro Gln Gln Pro  Ala Gly His
    4925                4930                4935
```

```
Pro Gln  Ala Ala Ala Leu Pro  Gly Gly Leu Pro Asp  Pro Val Arg
    4940                4945                4950

Gly Pro  Gly Gly Gly Gln His  Pro Arg Ala Leu Gly  Cys Arg Ser
    4955                4960                4965

Leu Glu  Lys Gln Gly Gly Gly  Arg Arg Ser Gly Asp  Arg Ser Arg
    4970                4975                4980

Gly His  Arg Leu Tyr Arg Gly  Ala Gly Arg Phe Cys  Arg Arg Gly
    4985                4990                4995

Ser Gly  Arg Gly Gly Asn Arg  Lys Asp Ser His Pro  Ala Gly Gly
    5000                5005                5010

Glu Gly  Gln Gln Gly Gln Glu  Leu Gln Arg Ala Arg  Gly Gln Glu
    5015                5020                5025

Lys His  Arg Leu Pro Gln Leu  Val Pro Gly Leu Gln  Leu Arg Arg
    5030                5035                5040

Pro Arg  Glu Gly Arg Ala Leu  Leu Asp Ala Ala His  His Leu Gly
    5045                5050                5055

Arg His  Leu Arg Arg Gly Ala  Ser Leu Leu Val Ala  Ala Arg His
    5060                5065                5070

Asp Ala  Arg Pro Gly His Leu  Pro Leu His Ala Ser  Ser Gln Leu
    5075                5080                5085

Pro Gly  Gly Gly Arg Arg Ala  Pro Ala Arg Leu Leu  Gln Glu Leu
    5090                5095                5100

Leu Gln  Arg Ala Gly Arg Leu  Leu Ala Ala Ala Ala  Arg Leu His
    5105                5110                5115

Leu Ala  His Ala Arg Leu Gln  Pro Leu Pro Arg Glu  Pro Asp Pro
    5120                5125                5130
```

```
Arg Pro  Pro Ala Arg Ala His  His Tyr His Arg Gln  Lys Arg Ser
    5135                5140                5145

Cys Ser  His Arg Ser Arg Asp  Pro Ala Ala Ala Gln  Gln Tyr Pro
    5150                5155                5160

Gly Ser  Pro Ala Arg Asp Arg  His Arg Gln Thr Pro  His Leu Pro
    5165                5170                5175

Leu Arg  Leu Gln Gly Pro Gly  Arg Ser Arg Ala Ala  Arg Pro Leu
    5180                5185                5190

Glu Pro  His Leu Leu Lys Asn  Val His Ser His Leu  Ala Gln His
    5195                5200                5205

Arg Leu  Gly Pro Ala Arg Ala  Gln Gln Asp Val Arg  Arg Arg Ser
    5210                5215                5220

Pro Thr  Leu His Ala Thr Pro  Arg Ala Arg Ala Arg  Ala Leu Pro
    5225                5230                5235

Arg Ser  Leu Gly Arg Pro Gln  Gly Pro Arg Ala Leu  Ala His His
    5240                5245                5250

Arg Arg  Arg Arg Asp Arg Pro  Gly Gly Gly Arg Arg  Ala Gln Leu
    5255                5260                5265

His Ala  Arg Arg Arg Ala Arg  Leu His Arg Gly Arg  Arg His Arg
    5270                5275                5280

Gln Arg  Gly Gly Arg Cys Ala  Pro Val Arg Pro Arg  Gln Glu Pro
    5285                5290                5295

Ala Ala  Ala His Arg Pro Ala  Ala Pro Glu His Pro  Arg His Ala
    5300                5305                5310

Arg Gly  Ala Ser Leu Ala Ala  Gln Gly Gln Ala His  Gly Thr Gln
    5315                5320                5325
```

```
Gly His  Ala Gln Gly Gly Gln  Thr Arg Gly Leu Arg  Gln Gln Gln
    5330                5335                5340

Arg Arg  Gln Asp Pro Gln Thr  Arg Gly His Gly Gly  Gly Gly Gly
    5345                5350                5355

His Arg  Gln His Val Pro Pro  Ala Ala Arg Gln Arg  Val Leu Gly
    5360                5365                5370

Ala Arg  Arg Arg His Arg Cys  Ala Arg Ala Arg Ala  His Pro Pro
    5375                5380                5385

Pro Ser  His Leu Lys Met Leu  Thr Ser Arg Cys Cys  Val Pro Ala
    5390                5395                5400

Ala Arg  Arg Met Ser Lys Arg  Lys Tyr Lys Glu Glu  Met Leu Gln
    5405                5410                5415

Val Ile  Ala Pro Glu Ile Tyr  Gly Pro Ala Val Lys  Glu Glu Arg
    5420                5425                5430

Lys Pro  Arg Lys Leu Lys Arg  Val Lys Lys Asp Lys  Lys Glu Glu
    5435                5440                5445

Glu Asp  Val Asp Gly Leu Val  Glu Phe Val Arg Glu  Phe Ala Pro
    5450                5455                5460

Arg Arg  Arg Val Gln Trp Arg  Gly Arg Lys Val Lys  Pro Val Leu
    5465                5470                5475

Arg Pro  Gly Thr Thr Val Val  Phe Thr Pro Gly Glu  Arg Ser Gly
    5480                5485                5490

Ser Ala  Ser Lys Arg Ser Tyr  Asp Glu Val Tyr Gly  Asp Glu Asp
    5495                5500                5505

Ile Leu  Glu Gln Ala Val Glu  Arg Leu Gly Glu Phe  Ala Tyr Gly
    5510                5515                5520
```

```
Lys Arg  Ser Arg Pro Ala Pro  Leu Lys Glu Glu Ala  Val Ser Ile
    5525                5530                5535

Pro Leu  Asp His Gly Asn Pro  Thr Pro Ser Leu Lys  Pro Val Thr
    5540                5545                5550

Leu Gln  Gln Val Leu Pro Ser  Ala Ala Pro Arg Arg  Gly Phe Lys
    5555                5560                5565

Arg Glu  Gly Gly Glu Asp Leu  Tyr Pro Thr Met Gln  Leu Met Val
    5570                5575                5580

Pro Lys  Arg Gln Lys Leu Glu  Asp Val Leu Glu His  Met Lys Val
    5585                5590                5595

Asp Pro  Glu Val Gln Pro Glu  Val Lys Val Arg Pro  Ile Lys Gln
    5600                5605                5610

Val Ala  Pro Gly Leu Gly Val  Gln Thr Val Asp Ile  Lys Ile Pro
    5615                5620                5625

Thr Glu  Pro Met Glu Thr Gln  Thr Glu Pro Val Lys  Pro Ser Thr
    5630                5635                5640

Ser Thr  Met Glu Val Gln Thr  Asp Pro Trp Met Pro  Ala Pro Ala
    5645                5650                5655

Ser Thr  Thr Arg Arg Arg Arg  Lys Tyr Gly Ala Ala  Ser Leu Leu
    5660                5665                5670

Met Pro  Asn Tyr Ala Leu His  Pro Ser Ile Ile Pro  Thr Pro Gly
    5675                5680                5685

Tyr Arg  Gly Thr Arg Phe Tyr  Arg Gly Tyr Thr Ser  Ser Arg Arg
    5690                5695                5700

Lys Thr  Thr Thr Arg Arg Arg  Arg Arg Arg Thr Arg  Arg Ser Ser
    5705                5710                5715
```

```
Thr Ala  Thr Ser Ala Ala Ala  Leu Val Arg Arg Val  Tyr Arg Ser
    5720                5725                5730

Gly Arg  Glu Pro Leu Thr Leu  Pro Arg Ala Arg Tyr  His Pro Ser
    5735                5740                5745

Ile Ala  Ile Leu Cys Arg Arg  Leu Leu Leu Ala Asp  Met Ala Leu
    5750                5755                5760

Thr Cys  Arg Leu Arg Val Pro  Ile Thr Gly Tyr Arg  Gly Arg Lys
    5765                5770                5775

Pro Arg  Arg Arg Arg Leu Thr  Gly Asn Gly Leu Arg  Arg His His
    5780                5785                5790

His Arg  Arg Arg Arg Ala Ile  Ser Lys Arg Leu Gly  Gly Gly Phe
    5795                5800                5805

Leu Pro  Ala Leu Ile Pro Ile  Ile Ala Ala Ala Ile  Gly Ala Ile
    5810                5815                5820

Pro Gly  Ile Ala Ser Val Ala  Val Gln Ala Ser Gln  Arg His Asp
    5825                5830                5835

Thr Ala  Trp Lys Ile Cys Asn  Lys Lys Met Asp Arg  Ser Trp Ser
    5840                5845                5850

Cys Asp  Val Cys Phe Met Glu  Asp Ile Asn Phe Ser  Ser Leu Ala
    5855                5860                5865

Pro Arg  His Gly Thr Arg Pro  Phe Met Gly Thr Trp  Ser Asp Ile
    5870                5875                5880

Gly Asn  Ser Gln Leu Asn Gly  Gly Ala Phe Asn Trp  Ser Ser Leu
    5885                5890                5895

Trp Ser  Gly Leu Lys Asn Phe  Gly Ser Thr Leu Lys  Thr Tyr Gly
    5900                5905                5910
```

```
Asn Lys  Ala Trp Asn Ser Ser  Thr Gly Gln Ala Leu  Arg Glu Lys
    5915                5920                5925

Leu Lys  Glu Gln Asn Phe Gln  Gln Lys Val Val Asp  Gly Leu Ala
    5930                5935                5940

Ser Gly  Ile Asn Gly Val Val  Asp Leu Ala Asn Gln  Ala Val Gln
    5945                5950                5955

Lys Gln  Ile Asn Ser Arg Leu  Asp Ala Val Pro Pro  Ala Gly Ser
    5960                5965                5970

Val Glu  Met Pro Gln Val Glu  Glu Glu Leu Pro Pro  Leu Asp Lys
    5975                5980                5985

Arg Gly  Asp Lys Arg Pro Arg  Pro Asp Ala Glu Glu  Thr Leu Leu
    5990                5995                6000

Thr His  Thr Asp Glu Pro Pro  Pro Tyr Glu Glu Ala  Val Lys Leu
    6005                6010                6015

Gly Leu  Pro Thr Thr Arg Pro  Val Ala Pro Leu Ala  Thr Gly Val
    6020                6025                6030

Leu Lys  Pro Ser Ser Ser Ser  Gln Pro Ala Thr Leu  Asp Leu Pro
    6035                6040                6045

Pro Pro  Ala Ser Arg Pro Ser  Thr Val Ala Lys Pro  Leu Pro Pro
    6050                6055                6060

Val Ala  Val Ala Ser Arg Ala  Pro Arg Gly Arg Pro  Gln Ala Asn
    6065                6070                6075

Trp Gln  Ser Thr Leu Asn Ser  Ile Val Gly Leu Gly  Val Gln Ser
    6080                6085                6090

Val Lys  Arg Arg Arg Cys Tyr  Lys Thr Leu Arg Leu  Thr Cys Leu
    6095                6100                6105
```

```
Ser Val  Cys Ile Cys Met Ser  Ala Asp Gln Lys Glu  Glu Glu Ala
    6110                6115                6120

Arg Arg  Arg Val Ala Arg Trp  Pro Pro His Arg Cys  Cys Pro Ser
    6125                6130                6135

Gly Arg  Thr Cys Thr Ser Pro  Asp Arg Thr Leu Arg  Ser Thr Val
    6140                6145                6150

Arg Val  Trp Cys Ser Ser Pro  Ala Pro Gln Thr Pro  Thr Ser Val
    6155                6160                6165

Trp Gly  Thr Ser Leu Gly Thr  Pro Arg Trp Arg Pro  Arg Thr Met
    6170                6175                6180

Pro Pro  Thr Ala Ala Ser Gly  Arg Cys Ala Ser Cys  Pro Trp Thr
    6185                6190                6195

Ala Arg  Thr Thr Pro Thr Arg  Thr Lys Cys Ala Thr  Arg Trp Pro
    6200                6205                6210

Trp Ala  Thr Thr Ala Cys Trp  Thr Trp Pro Ala Pro  Thr Leu Thr
    6215                6220                6225

Ser Ala  Ala Cys Trp Ile Gly  Gly Pro Ala Ser Asn  Pro Thr Pro
    6230                6235                6240

Ala Pro  Pro Thr Thr Ala Trp  Leu Pro Arg Glu Arg  Pro Thr Leu
    6245                6250                6255

Ala Ser  Gly His Ile Lys Leu  Val Ile Leu Ile Gln  Lys Lys Pro
    6260                6265                6270

Ile His  Met Glu Met His Leu  Cys Lys Ala Leu Ala  Leu Gln Arg
    6275                6280                6285

Met Val  Phe Asn Leu Glu Leu  Thr Ala Met Val Arg  Gln Ser Met
    6290                6295                6300
```

```
Gln Thr  Lys Leu Ile Asn Gln  Ser Leu Lys Trp Val  Met Leu Asn
    6305                6310                6315

Gly Met  Thr Ser Leu Val Leu  Met Lys Asn Met Glu  Ala Glu Leu
    6320                6325                6330

Leu Ser  Leu Thr Pro Lys Ser  Leu Ala Met Val Leu  Leu Pro Ser
    6335                6340                6345

Leu Pro  Ile Lys Lys Glu Ala  Arg Gln Met Lys Pro  Lys Gln Ala
    6350                6355                6360

Val Pro  Lys Asn Met Thr Leu  Thr Trp His Ser Ser  Ile Ile Glu
    6365                6370                6375

Val Gln  Leu Pro Pro Ala Pro  Gln Lys Leu Phe Cys  Ile Leu Arg
    6380                6385                6390

Met Trp  Ile Trp Lys Leu Gln  Ile Pro Ile Leu Tyr  Thr Arg Gln
    6395                6400                6405

Val Gln  Met Thr Val Ala Leu  Leu Ser Ile Trp Val  Ser Ser Pro
    6410                6415                6420

Cys Pro  Thr Asp Pro Thr Thr  Leu Ala Ser Glu Thr  Thr Leu Ser
    6425                6430                6435

Val Cys  Thr Thr Thr Ala Leu  Ala Ile Trp Val Tyr  Trp Leu Asp
    6440                6445                6450

Arg Pro  Pro Ser Met Leu Trp  Trp Thr Cys Arg Thr  Glu Thr Pro
    6455                6460                6465

Asn Cys  Pro Thr Ser Ser Cys  Leu Thr Leu Trp Val  Thr Glu Pro
    6470                6475                6480

Gly Ile  Ser Val Cys Gly Ile  Arg Arg Trp Thr Val  Met Thr Pro
    6485                6490                6495
```

```
Met Cys  Ala Leu Leu Lys Ile  Thr Val Trp Arg Met  Asn Phe Leu
    6500                6505                6510

Thr Ile  Ala Ser Pro Trp Met  Leu Trp Val Glu Leu  Ile Leu Thr
    6515                6520                6525

Arg Glu  Leu Arg Pro Met Val  Ile Ile Lys Pro Pro  Gly Pro Lys
    6530                6535                6540

Met Ile  Leu Leu Met Met Leu  Met Asn Trp Ala Arg  Ala Ile Leu
    6545                6550                6555

Ser Pro  Trp Arg Ser Thr Ser  Arg Pro Thr Cys Gly  Gly Thr Ser
    6560                6565                6570

Ser Thr  Arg Thr Trp Arg Cys  Thr Cys Pro Thr Pro  Thr Ser Thr
    6575                6580                6585

Arg Arg  Pro Thr Ser Arg Cys  Pro Pro Thr Pro Thr  Pro Thr Ile
    6590                6595                6600

Thr Thr  Ala Ala Trp Trp Arg  Pro Arg Trp Trp Thr  Pro Thr Ser
    6605                6610                6615

Thr Ser  Gly Arg Ala Gly Arg  Trp Thr Pro Trp Thr  Thr Ser Thr
    6620                6625                6630

Pro Ser  Thr Thr Thr Ala Thr  Arg Ala Cys Asp Thr  Ala Pro Cys
    6635                6640                6645

Ser Trp  Ala Thr Gly Ala Thr  Cys Pro Ser Thr Ser  Arg Cys Pro
    6650                6655                6660

Lys Ser  Phe Ser Pro Ser Arg  Ala Ser Cys Ser Cys  Pro Gly Pro
    6665                6670                6675

Thr Pro  Thr Ser Gly Thr Ser  Ala Arg Thr Ser Thr  Ser Cys Arg
    6680                6685                6690
```

```
Ala Pro  Ser Ala Thr Thr Cys  Ala Arg Thr Gly Pro  Pro Ser Pro
    6695                 6700                 6705

Ser Pro  Ala Ser Thr Ser Thr  Pro Pro Ser Ser Pro  Trp Arg Thr
    6710                 6715                 6720

Thr Pro  Pro Pro Arg Ser Arg  Pro Cys Cys Ala Thr  Thr Pro Thr
    6725                 6730                 6735

Thr Ser  Pro Ser Thr Thr Thr  Ser Arg Arg Pro Thr  Cys Ser Thr
    6740                 6745                 6750

Pro Ser  Arg Pro Thr Pro Pro  Thr Cys Pro Ser Pro  Ser Pro Arg
    6755                 6760                 6765

Ala Thr  Gly Pro Pro Ser Ala  Ala Gly Pro Ser Arg  Ala Ser Arg
    6770                 6775                 6780

Pro Ala  Arg Arg Pro Arg Ser  Ala Pro Gly Ser Thr  Pro Thr Ser
    6785                 6790                 6795

Ser Thr  Arg Ala Pro Ser Pro  Thr Ser Thr Ala Pro  Ser Thr Ser
    6800                 6805                 6810

Thr Thr  Pro Ser Arg Arg Ser  Pro Ser Pro Ser Thr  Pro Pro Ser
    6815                 6820                 6825

Ala Gly  Pro Ala Thr Thr Ala  Ser Arg Pro Thr Ser  Ser Lys Ser
    6830                 6835                 6840

Ser Ala  Pro Ser Thr Glu Arg  Gly Thr Thr Trp Pro  Ser Ala Thr
    6845                 6850                 6855

Pro Arg  Thr Gly Ser Trp Ser  Arg Cys Trp Pro Thr  Thr Thr Ser
    6860                 6865                 6870

Ala Thr  Arg Ala Ser Thr Cys  Pro Arg Ala Thr Arg  Thr Ala Cys
    6875                 6880                 6885
```

```
Thr Pro  Ser Ser Ala Thr Ser  Ser Pro Ala Ala Arg  Ser Trp Thr
    6890                 6895                 6900

Arg Ser  Thr Thr Arg Thr Thr  Arg Pro Ser Pro Trp  Pro Thr Ser
    6905                 6910                 6915

Thr Thr  Thr Arg Ala Ser Ser  Ala Thr Ser Arg Pro  Pro Cys Ala
    6920                 6925                 6930

Arg Ala  Ser Pro Thr Pro Pro  Thr Thr Pro Thr Arg  Ser Ser Ala
    6935                 6940                 6945

Arg Ala  Pro Ser Pro Ala Ser  Pro Arg Lys Ser Ser  Ser Ala Thr
    6950                 6955                 6960

Gly Ser  Cys Gly Ala Ser Pro  Ser Pro Ala Thr Ser  Cys Pro Trp
    6965                 6970                 6975

Ala Arg  Ser Pro Thr Ser Ala  Arg Thr Cys Ser Thr  Pro Thr Pro
    6980                 6985                 6990

Pro Thr  Arg Thr Ile Ser Lys  Ser Thr Pro Trp Met  Ser Pro Pro
    6995                 7000                 7005

Phe Ser  Met Leu Ser Ser Lys  Ser Ser Thr Ser Ser  Glu Cys Thr
    7010                 7015                 7020

Ser Pro  Thr Ala Ala Ser Ser  Arg Pro Ser Thr Cys  Ala Arg Pro
    7025                 7030                 7035

Ser Arg  Pro Ala Thr Pro Pro  Pro Lys Pro Leu Ala  Ser Cys Lys
    7040                 7045                 7050

Met Thr  Ala Cys Ala Gly Ser  Gly Glu Gln Glu Leu  Arg Ala Ile
    7055                 7060                 7065

Leu Arg  Asp Leu Gly Cys Gly  Pro Cys Phe Leu Gly  Thr Phe Asp
    7070                 7075                 7080
```

```
Lys Arg  Phe Pro Gly Phe Met  Ala Pro His Lys Leu  Ala Cys Ala
    7085                7090                7095

Ile Val  Asn Thr Ala Gly Arg  Glu Thr Gly Gly Glu  His Trp Leu
    7100                7105                7110

Ala Phe  Ala Trp Asn Pro Arg  Ser His Thr Cys Tyr  Leu Phe Asp
    7115                7120                7125

Pro Phe  Gly Phe Ser Asp Glu  Arg Leu Lys Gln Ile  Tyr Gln Phe
    7130                7135                7140

Glu Tyr  Glu Gly Leu Leu Arg  Arg Ser Ala Leu Ala  Thr Glu Asp
    7145                7150                7155

Arg Cys  Val Thr Leu Glu Lys  Ser Thr Gln Thr Val  Gln Gly Pro
    7160                7165                7170

Arg Ser  Ala Ala Cys Gly Leu  Phe Cys Cys Met Phe  Leu His Ala
    7175                7180                7185

Phe Val  His Trp Pro Asp Arg  Pro Met Asp Lys Asn  Pro Thr Met
    7190                7195                7200

Asn Leu  Leu Thr Gly Val Pro  Asn Gly Met Leu Gln  Ser Pro Gln
    7205                7210                7215

Val Glu  Pro Thr Leu Arg Arg  Asn Gln Glu Ala Leu  Tyr Arg Phe
    7220                7225                7230

Leu Asn  Ala His Ser Ala Tyr  Phe Arg Ser His Arg  Ala Arg Ile
    7235                7240                7245

Glu Lys  Ala Thr Ala Phe Asp  Arg Met Asn Gln Asp  Met Ser Gly
    7250                7255                7260

Val Cys  Met Met Leu Tyr Ser  Ser Thr Ala His Val  Tyr Ala Thr
    7265                7270                7275
```

```
Phe Ser  Glu Ala Leu Thr Leu  Phe Arg Asn Arg Arg  Gly Ser Ala
    7280                 7285                 7290

Gly Ser  Arg His Gly Pro Arg  Ala Gly Ile Arg Cys  Gly Thr Gly
    7295                 7300                 7305

Thr Trp  Ala Ala Thr Thr Arg  Gly Ser Ala Ala Ser  Ala Arg Gly
    7310                 7315                 7320

Gly Arg  Gly Thr Ser Arg Ser  Thr Ala Cys Ala Val  Ala Gly Arg
    7325                 7330                 7335

Pro Ala  Gly Arg Ala Arg Arg  Ser Asn Arg Ser Trp  Asp Pro Arg
    7340                 7345                 7350

Ser Ala  Arg Glu Ser Tyr Gly  Thr Arg Gly Cys Ser  Thr Gly Thr
    7355                 7360                 7365

Pro Ser  Gly Pro Gly Ala Ser  Arg Ser Pro Ala Pro  Ser Arg Arg
    7370                 7375                 7380

Cys Pro  Pro Arg Pro Asp Pro  Arg Arg Trp Pro Ser  Arg Arg Gly
    7385                 7390                 7395

Ser Ser  Cys Arg Ser Ala Ala  Pro Cys Trp Ala Arg  Ser Arg Ala
    7400                 7405                 7410

Cys Gly  Cys Asn Arg Ser Ala  Gly Gly Ser Ala Ser  Ser Gly Pro
    7415                 7420                 7425

Ala Arg  Ser Ser Cys Pro Gly  Thr Trp Pro Ser Lys  Pro Pro Ala
    7430                 7435                 7440

Gly Gly  Arg Pro Ala Ala Pro  Cys Arg Pro Arg Arg  Arg Pro Arg
    7445                 7450                 7455

Arg Thr  Cys Arg Thr Gly Trp  Trp Arg Ser Gln Arg  Arg Ala Arg
    7460                 7465                 7470
```

```
Ser Ser  Ala Arg Arg Cys Trp  Pro Ala Ala Pro Arg  Cys Ala Pro
    7475                 7480                 7485

Ser Gly  Ser Gly Ser Trp Pro  Gly Arg Gly Ser Pro  Ser Ala Arg
    7490                 7495                 7500

Ala Ala  Arg Ser Arg Ser Pro  His Pro Ser Arg Ser  Cys Ala Pro
    7505                 7510                 7515

Ser Gly  Ser Ser Arg Ser Arg  Ala Gly Thr Ala Ala  Cys Pro Arg
    7520                 7525                 7530

Pro Arg  Cys Thr Arg Ala Ala  Thr Ala Arg Ser Arg  Cys Ser Pro
    7535                 7540                 7545

Ser Ser  Cys Gly Arg Ser Gly  Ser Ala Ser Ala Arg  Ser Pro Ala
    7550                 7555                 7560

Gly Ser  Gly Pro Ser Ser Trp  Ser Gly Ser Cys Cys  Trp Arg Ser
    7565                 7570                 7575

Ala Glu  Cys Arg Gly Ala Pro  Arg Ser His Thr Gly  Gly Arg Tyr
    7580                 7585                 7590

Gly Gly  Thr Pro Arg Pro Ala  Arg Ala Ser Ala Gly  Arg Arg Thr
    7595                 7600                 7605

Ser Gly  Arg Ser Pro Arg Gly  Thr Gly Pro Ser Ala  Ala Ser Ser
    7610                 7615                 7620

Leu Pro  Cys Pro Ser Pro Arg  Pro Lys Arg Ser Ala  Gly Ser Gly
    7625                 7630                 7635

Gly Ser  Ser Pro Leu Ser Ser  Ser Pro Pro Pro Lys  Ser Gly Gly
    7640                 7645                 7650

Arg Ser  Arg Pro Gly Ser Gln  Thr Leu Ala Cys Arg  Pro Ser Arg
    7655                 7660                 7665
```

```
Cys Ala  Arg Gly Glu Ser Ser  Pro Arg Pro Pro Ala  Pro Pro Arg
    7670                 7675                 7680

Pro Ala  Phe Arg Pro Arg Cys  Pro Gly Cys Leu Ala  Lys Ala His
    7685                 7690                 7695

Ala Trp  Ser Cys Gly Val Ser  Phe Trp Ala Ala Glu  Ala Ala Ala
    7700                 7705                 7710

Glu Thr  Cys Trp Ala Ser Ala  Ser Ser Arg Ser Pro  Arg Leu Phe
    7715                 7720                 7725

Leu Leu  Leu Gly Arg Arg Pro  Arg Pro Arg Gly Gly  Arg His Ala
    7730                 7735                 7740

Ser Ser  Gly Ala Glu Ala Glu  Ala Thr Gly Ser Arg  Gly Ser Ala
    7745                 7750                 7755

Gly Gly  Trp Gln Ser Pro Phe  Arg Val Arg Gly Cys  Ala Pro Gly
    7760                 7765                 7770

Gly Ala  Ala Leu Thr Asp Phe  Leu Arg Gly Arg Pro  Leu Cys Ser
    7775                 7780                 7785

Pro Arg  Glu Gln Ala Trp Arg  Leu Ser His Arg Arg  Gln His Arg
    7790                 7795                 7800

His Leu  Pro Pro Pro Pro Pro  Thr Arg Thr Ser Ser  Ser Arg Met
    7805                 7810                 7815

Lys Ala  Pro Pro Arg Arg Pro  Ala Pro Pro Pro Thr  Pro Gln Pro
    7820                 7825                 7830

Gln Thr  Cys Lys Arg Trp Arg  Asn Pro Ser Arg Leu  Thr Trp Ala
    7835                 7840                 7845

Thr Arg  Pro Arg Ser Thr Arg  Arg Ser Trp Gln Arg  Ala Phe Gln
    7850                 7855                 7860
```

```
Pro Arg  Lys Arg Thr Thr Lys  Ser Ser Gln Ser Arg  Lys Gln Arg
    7865                 7870                 7875

Ala Ser  Arg Thr Arg Leu Gly  Ser Ser Met Ala Thr  Thr Ala Gly
    7880                 7885                 7890

Gln Arg  Thr Cys Ser Ser Ser  Ile Trp Pro Ala Asn  Ala Ser Ser
    7895                 7900                 7905

Ser Arg  Thr Arg Cys Ser Thr  Ala Pro Arg Cys Pro  Ser Ala Trp
    7910                 7915                 7920

Arg Ser  Ser Ala Ala Pro Thr  Ser Ala Thr Ser Ser  Arg Arg Ala
    7925                 7930                 7935

Cys Pro  Pro Ser Ala Ser Pro  Thr Ala Pro Ala Ser  Pro Thr Arg
    7940                 7945                 7950

Ala Ser  Thr Ser Thr Arg Ser  Ser Arg Cys Pro Arg  Pro Trp Pro
    7955                 7960                 7965

Pro Thr  Thr Ser Phe Ser Arg  Thr Lys Gly Ser Pro  Ser Pro Ala
    7970                 7975                 7980

Ala Pro  Thr Ala Pro Ala Pro  Thr Pro Cys Ser Thr  Trp Ala Pro
    7985                 7990                 7995

Ala Pro  Ala Tyr Leu Ile Ser  Pro Pro Trp Lys Arg  Phe Pro Arg
    8000                 8005                 8010

Ser Ser  Arg Val Trp Ala Ala  Thr Arg Leu Gly Pro  Arg Thr Leu
    8015                 8020                 8025

Cys Lys  Glu Ala Glu Arg Ser  Met Ser Thr Thr Ala  Pro Trp Trp
    8030                 8035                 8040

Ser Trp  Lys Ala Thr Thr Arg  Ala Trp Arg Ser Ser  Ser Ala Arg
    8045                 8050                 8055
```

```
Ser Ser  Pro Thr Ser Pro Thr  Arg Arg Ser Thr Cys  Pro Pro Arg
    8060                8065                8070

Ser Ala  Pro Ser Trp Thr Arg  Cys Ser Ser Ser Ala  Pro Arg Pro
    8075                8080                8085

Ser Arg  Arg Arg Arg Cys Arg  Thr Pro Arg Ala Arg  Thr Arg Ala
    8090                8095                8100

Ser Pro  Trp Ser Ala Thr Ser  Ser Trp Arg Ala Gly  Trp Glu Arg
    8105                8110                8115

Val Ala  Pro Pro Arg Ala Trp  Lys Ser Gly Ala Ser  Ser Trp Pro
    8120                8125                8130

Trp Ser  Trp Pro Trp Ser Trp  Ser Val Cys Ala Ala  Ser Ser Pro
    8135                8140                8145

Thr Arg  Arg Pro Cys Ala Arg  Ser Arg Arg Thr Cys  Thr Thr Ser
    8150                8155                8160

Ser Asp  Thr Gly Ser Cys Ala  Arg Pro Ala Arg Ser  Pro Thr Trp
    8165                8170                8175

Ser Pro  Thr Trp Ser Pro Thr  Trp Ala Ser Cys Thr  Arg Thr Ala
    8180                8185                8190

Trp Gly  Arg Thr Cys Cys Thr  Pro Pro Cys Ala Gly  Arg Pro Ala
    8195                8200                8205

Ala Thr  Thr Ser Ala Thr Ala  Ser Thr Cys Thr Ser  Ala Thr Pro
    8210                8215                8220

Gly Arg  Arg Ala Trp Ala Cys  Gly Ser Ser Ala Trp  Arg Ser Arg
    8225                8230                8235

Thr Lys  Ser Ser Ala Ser Ser  Cys Arg Arg Thr Ser  Arg Pro Cys
    8240                8245                8250
```

```
Gly Pro  Gly Ser Thr Ser Ala  Pro Pro Pro Arg Thr  Trp Pro Thr
    8255                 8260                 8265

Ser Ser  Ser Pro Ser Ala Cys  Gly Arg Cys Ala Thr  Gly Cys Pro
    8270                 8275                 8280

Thr Leu  Ala Lys Ala Cys Cys  Lys Thr Phe Ala Leu  Ser Ser Ser
    8285                 8290                 8295

Asn Ala  Pro Gly Ser Cys Pro  Pro Pro Ala Pro Arg  Cys Pro Arg
    8300                 8305                 8310

Thr Ser  Cys Arg Pro Ser Ala  Ser Ala Pro Arg Arg  Ser Gly Ala
    8315                 8320                 8325

Thr Ala  Thr Cys Cys Ala Trp  Pro Thr Thr Trp Pro  Thr Thr Arg
    8330                 8335                 8340

Thr Ser  Arg Thr Ser Ala Ala  Arg Ala Cys Ser Ser  Ala Thr Ala
    8345                 8350                 8355

Ala Ala  Thr Ser Ala Arg Arg  Thr Ala Pro Trp Pro  Ala Thr Pro
    8360                 8365                 8370

Ser Cys  Ala Arg Pro Arg Ser  Ser Ala Pro Ser Ser  Cys Lys Ala
    8375                 8380                 8385

Pro Ala  Arg Ala Arg Gly Val  Asn Ser Pro Arg Gly  Cys Gly Pro
    8390                 8395                 8400

Arg Pro  Thr Cys Ala Ser Ser  Cys Pro Arg Thr Thr  Ile Pro Ser
    8405                 8410                 8415

Arg Ser  Gly Ser Thr Arg Thr  Asn Pro Ser Arg Pro  Arg Pro Ser
    8420                 8425                 8430

Cys Arg  Pro Ala Ser Ser Pro  Arg Gly Pro Ser Trp  Pro Asn Cys
    8435                 8440                 8445
```

```
Lys Pro  Ser Arg Asn Pro Ala  Lys Asn Phe Cys Lys  Arg Ala Thr
    8450                 8455                 8460

Gly Ser  Thr Trp Thr Pro Arg  Pro Glu Arg Ser Ser  Thr Pro Ala
    8465                 8470                 8475

Ser Pro  Arg Met Pro Arg Gly  Ser Ser Lys Lys Leu  Lys Val Glu
    8480                 8485                 8490

Leu Pro  Pro Pro Pro Glu Asp  Leu Glu Glu Asp Trp  Glu Ser Ser
    8495                 8500                 8505

Gln Ala  Glu Glu Glu Glu Met  Glu Asp Trp Asp Ser  Thr Gln Ala
    8510                 8515                 8520

Glu Glu  Asp Ser Leu Gln Asp  Ser Leu Glu Glu Glu  Asp Glu Val
    8525                 8530                 8535

Glu Glu  Ala Glu Glu Glu Ala  Ala Ala Ala Arg Pro  Ser Ser Ser
    8540                 8545                 8550

Ala Glu  Glu Glu Lys Ala Ser  Ser Thr Asp Thr Ile  Ser Ala Pro
    8555                 8560                 8565

Gly Arg  Gly Arg Gly Gly Arg  Ala His Ser Arg Trp  Asp Glu Thr
    8570                 8575                 8580

Gly Arg  Phe Pro Asn Pro Thr  Thr Gln Thr Gly Lys  Lys Glu Arg
    8585                 8590                 8595

Gln Gly  Tyr Lys Ser Trp Arg  Gly His Lys Asn Ala  Ile Val Ser
    8600                 8605                 8610

Cys Leu  Gln Ala Cys Gly Gly  Asn Ile Ser Phe Thr  Arg Arg Tyr
    8615                 8620                 8625

Leu Leu  Phe His Arg Gly Val  Asn Phe Pro Arg Asn  Ile Leu His
    8630                 8635                 8640
```

```
Tyr Tyr  Arg His Leu His Ser  Pro Tyr Tyr Cys Phe  Gln Glu Glu
    8645                8650                8655

Ala Glu  Thr Gln Gln Gln Gln  Gln Gln Gln Lys Thr  Ser Gly Ser
    8660                8665                8670

Ser Lys  Ile His Ser Gly Gly  Arg Trp Thr Glu Asp  Arg Gly Glu
    8675                8680                8685

Arg Ala  Gly Ala Asp Pro Gly  Ala Glu Glu Pro Asp  Leu Ser His
    8690                8695                8700

Pro Leu  Cys His Leu Pro Ala  Glu Ser Gly Ala Arg  Ala Gly Thr
    8705                8710                8715

Glu Ser  Gln Glu Pro Phe Ser  Ala Leu Ala His Pro  Gln Leu Ser
    8720                8725                8730

Val Ser  Gln Glu Arg Arg Pro  Thr Ser Ala His Ser  Arg Gly Arg
    8735                8740                8745

Arg Gly  Ser Leu Gln Gln Val  Leu Arg Ala His Ser  Arg Val Ala
    8750                8755                8760

Arg Ala  Arg Pro His Thr Glu  Lys Gly Gly Asn Tyr  Val Thr Thr
    8765                8770                8775

Cys Ala  Leu Arg Pro Thr Ile  Ile Met Ser Lys Glu  Ile Pro Thr
    8780                8785                8790

Pro Tyr  Met Trp Ser Tyr Gln  Pro Gln Met Gly Leu  Ala Ala Gly
    8795                8800                8805

Ala Ala  Gln Asp Tyr Ser Thr  Arg Met Asn Trp Leu  Ser Ala Gly
    8810                8815                8820

Pro Ala  Met Ile Ser Arg Val  Asn Asp Ile Arg Ala  His Arg Asn
    8825                8830                8835
```

```
Gln Ile  Leu Leu Glu Gln Ser  Ala Ile Thr Ala Thr  Pro Arg His
    8840                 8845                 8850

His Leu  Asn Pro Arg Asn Trp  Pro Ala Ala Leu Val  Tyr Gln Glu
    8855                 8860                 8865

Ile Pro  Gln Pro Thr Thr Val  Leu Leu Pro Arg Asp  Ala Gln Ala
    8870                 8875                 8880

Glu Val  Gln Leu Thr Asn Ser  Gly Val Gln Leu Ala  Gly Gly Ala
    8885                 8890                 8895

Ala Leu  Cys Arg His Arg Pro  Ala Gln Gly Ile Lys  Arg Leu Val
    8900                 8905                 8910

Ile Arg  Gly Arg Gly Thr Gln  Leu Asn Asp Glu Val  Val Ser Ser
    8915                 8920                 8925

Ser Leu  Gly Leu Arg Pro Asp  Gly Val Phe Gln Leu  Ala Gly Ser
    8930                 8935                 8940

Gly Arg  Ser Ser Phe Thr Pro  Arg Gln Ala Val Leu  Thr Leu Glu
    8945                 8950                 8955

Ser Ser  Ser Ser Gln Pro Arg  Ser Gly Gly Ile Gly  Thr Leu Gln
    8960                 8965                 8970

Phe Val  Glu Glu Phe Thr Pro  Ser Val Tyr Phe Asn  Pro Phe Ser
    8975                 8980                 8985

Gly Ser  Pro Gly His Tyr Pro  Asp Glu Phe Ile Pro  Asn Phe Asp
    8990                 8995                 9000

Ala Ile  Ser Glu Ser Val Asp  Gly Tyr Asp Met Ser  His Gly Gly
    9005                 9010                 9015

Ala Ala  Asp Leu Ala Arg Leu  Arg His Leu Asp His  Cys Arg Arg
    9020                 9025                 9030
```

```
Phe Arg  Cys Phe Ala Arg Asp  Leu Ala Glu Phe Ala  Tyr Phe Glu
    9035                 9040                 9045

Leu Pro  Glu Glu His Pro Gln  Gly Pro Ala His Gly  Val Arg Ile
    9050                 9055                 9060

Val Val  Glu Gly Gly Leu Asp  Ser His Leu Leu Arg  Ile Phe Ser
    9065                 9070                 9075

Gln Arg  Pro Ile Leu Ala Glu  Arg Glu Gln Gly Gln  Thr Leu Leu
    9080                 9085                 9090

Thr Leu  Tyr Cys Ile Cys Asn  His Pro Gly Leu His  Glu Ser Leu
    9095                 9100                 9105

Cys Cys  Leu Leu Cys Thr Glu  Tyr Asn Lys Ser Asp  Gln Arg Leu
    9110                 9115                 9120

Leu Arg  Thr Ser Val Cys Ser  Cys Tyr Gln Pro Val  Pro Val Leu
    9125                 9130                 9135

His Arg  Glu Arg Asp Arg Ala  Pro Ala Pro Val Ala  Pro Gln Glu
    9140                 9145                 9150

Val Pro  His Leu Ala Val Pro  Gly Leu Ser Asp Arg  Arg Cys Gln
    9155                 9160                 9165

Pro Leu  Arg Gln Arg Arg Ser  Pro Ala Glu Arg Pro  Cys Gln Pro
    9170                 9175                 9180

Tyr Phe  Phe His Pro Gln Lys  Gln Ala Pro Ala Leu  Pro Thr Leu
    9185                 9190                 9195

Pro Pro  Arg Asp Leu Ser Val  Arg Leu Gly Thr Leu  Pro Ser His
    9200                 9205                 9210

Leu Pro  Pro Asp Pro Glu Tyr  His Ser Val Ala Pro  Arg Tyr Gln
    9215                 9220                 9225
```

```
Pro Asn  Tyr Pro Pro Thr Pro  Pro Ser Arg Pro Arg  Thr Cys Thr
    9230                 9235                 9240

Glu Leu  Glu Lys Tyr Ala Thr  Ile His Ala His Ile  Arg Leu Gly
    9245                 9250                 9255

Arg Ala  Thr Ala Thr His Ala  Pro Arg Tyr Leu Leu  Gln Ser Asn
    9260                 9265                 9270

Arg Arg  Arg Leu Thr His Trp  Pro Thr Thr Thr Ser  Thr Thr Phe
    9275                 9280                 9285

Ser Trp  Thr Trp Thr Ala Ala  Pro Arg Ser Ser Asp  Ser Pro Asn
    9290                 9295                 9300

Phe Ala  Phe Ala Ser Ser Arg  Arg Glu Pro Ser Arg  Ser Cys Arg
    9305                 9310                 9315

Thr Ala  Pro Ser Thr Ser Ala  Arg Lys Ala Ser Ser  Ala Trp Asn
    9320                 9325                 9330

Arg Pro  Arg Ser Pro Thr Arg  Ser Pro Arg Pro Thr  Ile Ala Ser
    9335                 9340                 9345

Pro Thr  Ser Ser Cys Ser Ser  Ala Arg Ser Ser Pro  Ala Trp Ser
    9350                 9355                 9360

Glu Ser  Thr Pro Ser Ser Ser  Pro Ser Ser Arg Ala  Ile Pro Arg
    9365                 9370                 9375

Gly Ala  Ser Thr Ala Pro Ala  Thr Pro Pro Thr Ala  Ser Thr Leu
    9380                 9385                 9390

Ser Arg  Pro Ser Ala Ala Ser  Ala Thr Ser Ser Pro  Thr Asn His
    9395                 9400                 9405

Pro Leu  Ile Gln Asn Lys Tyr  His Ile Asp Asp Asp  Leu Asn Lys
    9410                 9415                 9420
```

```
Lys Ser  Phe Asp Leu Lys Arg  Tyr Asn His Ile Asp  Asp Leu Ser
    9425                9430                9435

Phe Lys  Lys Arg Ile Thr Tyr  Leu Lys Ser Asp Thr  Arg Ser Leu
    9440                9445                9450

Ser Met  Phe Ser Ala Asn Thr  Thr Ser Leu Pro Ser  Ser Gln Leu
    9455                9460                9465

Trp Tyr  Cys Arg Pro Arg Arg  Ala Ala Asn Phe Leu  His Thr Leu
    9470                9475                9480

Lys Gly  Met Ser Asn Ser Ser  Cys Pro Ser Ile Phe  Ile Leu Ser
    9485                9490                9495

Ser Ile  Arg Cys Pro Lys Ser  Ala Ser Gly Trp Met  Met Thr Ser
    9500                9505                9510

Thr Pro  Ser Thr Pro Thr Met  Gln Thr Thr His Arg  Pro Cys Pro
    9515                9520                9525

Ser Ser  Thr Pro Pro Ser Ser  Leu Gln Met Asp Ser  Lys Arg Ser
    9530                9535                9540

Pro Trp  Gly Cys Cys Pro Cys  Asp Trp Leu Thr Pro  Ser Pro Pro
    9545                9550                9555

Arg Thr  Gly Lys Ser Pro Ser  Ser Trp Glu Arg Gly  Trp Thr Ser
    9560                9565                9570

Thr Pro  Arg Glu Asn Ser Ser  Pro Thr Arg Pro Pro  Arg Pro Pro
    9575                9580                9585

Pro Leu  Ser Val Phe Pro Thr  Thr Pro Phe Pro Leu  Thr Trp Ile
    9590                9595                9600

Pro Leu  Phe Ile Pro Lys Met  Glu Asn Tyr Pro Tyr  Lys Phe Leu
    9605                9610                9615
```

```
His Arg  Thr Tyr Asn Gln Pro  Phe Thr His Leu Leu  Met Asp Gln
    9620                9625                9630

Val Asp  Val Val Ala Leu Leu  Leu Gln Tyr Ser Trp  Pro Leu His
    9635                9640                9645

Ser Leu  Leu Met Lys Lys Glu  Ile Leu Lys Leu Thr  Pro Val Val
    9650                9655                9660

His Gln  Leu Met Gln Val Asp  Leu Val Ser Thr Ala  Lys Glu Gly
    9665                9670                9675

Ser Leu  Ser Leu Pro Gln Glu  Met Gln Leu Lys Ala  Thr Ala Gly
    9680                9685                9690

Leu Lys  Val Asp Leu Lys Val  Met Ala Leu Gln Thr  Leu Ala Glu
    9695                9700                9705

Asp Trp  Asn Leu Glu Pro Leu  Val Gln Arg Leu Met  Ser Gln Met
    9710                9715                9720

His Thr  Gln Phe Lys Leu Asn  Trp Val Leu Ala Leu  Pro Leu Thr
    9725                9730                9735

Val Gln  Ala Pro Leu Leu Leu  Gly Thr Lys Arg Met  Ile Asn Leu
    9740                9745                9750

His Tyr  Gly Pro Gln Pro Thr  Pro Arg Gln Ile Ala  Lys Tyr Thr
    9755                9760                9765

Leu Lys  Lys Met Pro Asn Ser  His Phe Ala Gln Ser  Val Glu Val
    9770                9775                9780

Lys Phe  Trp Val Leu Leu Tyr  Trp Gln Ile Met Glu  Val Ser Thr
    9785                9790                9795

Gln Ser  Gln Thr Gln Ala Leu  His Ser Ser Pro Ser  Ser Leu Met
    9800                9805                9810
```

```
Gln Val  Glu Phe Cys Ala Ala  Pro His Thr Lys Asn  Ile Gly Thr
    9815                 9820                 9825

Ser Glu  Arg Glu Met Leu His  Leu Leu Ser Pro Ile  Leu Met Leu
    9830                 9835                 9840

Val Leu  Cys Leu Thr Arg Pro  Ile Leu Lys Thr His  Leu Gln Leu
    9845                 9850                 9855

Gln Lys  Ala Ile Leu Ser Val  Lys Phe Ile Ser Met  Gly Met Arg
    9860                 9865                 9870

Pro Asn  His Cys Leu Leu Leu  Leu Met Lys Leu Arg  Met Gln Leu
    9875                 9880                 9885

Ala Pro  Thr Val Ser Leu Phe  Asn Gly Asn Gly Ile  Val Leu Ser
    9890                 9895                 9900

Thr Gln  Val Lys His Leu Leu  Pro Ala Pro Ser Pro  Ser Pro Thr
    9905                 9910                 9915

Ser Pro  Lys Asn Glu His Cys  Ile Pro Pro Cys Met  Pro Thr Leu
    9920                 9925                 9930

Pro Thr  Pro Leu Cys Leu Trp  Lys Lys Leu Ser Thr  Lys Asn Lys
    9935                 9940                 9945

Val Gln  Val Phe Tyr Phe Asn  Ser Phe Thr Gly Phe  Glu Gln Leu
    9950                 9955                 9960

Phe Phe  Leu His Pro Pro Arg  Thr Trp Asn Thr Pro  Pro Ser Pro
    9965                 9970                 9975

Pro Ala  Gln Pro Thr Ser Glu  Cys His Trp Trp Thr  Cys Phe Trp
    9980                 9985                 9990

Ser Pro  Arg Ser Thr Gln Phe   Gln Ser Glu Pro Val   Ser Gly Arg
    9995                 10000                10005
```

```
Ser Gly   Arg Asn Pro Pro Gly   Thr Pro Ala Ser Ala   Pro His Ser
    10010                10015                10020

Ser Thr   Ala Glu Asp Cys Pro   Arg Trp Ser Gly Ser   Arg Leu Ser
    10025                10030                10035

Gly Arg   Ser Arg Arg Ala Ala   Val Gly Ile Ile Val   Arg Glu Arg
    10040                10045                10050

Asp Arg   Pro Val Val Ser His   Gln Ala Pro Gln Gln   Ser Leu Pro
    10055                10060                10065

Pro Pro   Leu Arg Gln Ala Ala   Ala Gln Gly Val Arg   Val Gln Gly
    10070                10075                10080

Leu Pro   Gln His Asp Ala His   Gly Pro Gln His Gln   Ser Ser Gly
    10085                10090                10095

Ala Ala   Gly Ala Ala Ala His   Ala Asp Leu Ala Gln   Val Ala Ala
    10100                10105                10110

Val Arg   Ala Thr Gln Asp His   Gln Val Val Gln Gln   Ser Ile Val
    10115                10120                10125

Gln His   Ala Pro Ala Glu Thr   His Arg Gly Lys Asp   Ala Thr His
    10130                10135                10140

Val Ala   Val Val Pro Asp Pro   Gln Val Asn Gln Val   Ala Leu Pro
    10145                10150                10155

Pro Glu   His Ala Ala His Val   His Asp Leu Leu Gly   His Val Ala
    10160                10165                10170

Val His   His Leu Pro Val Pro   His His Pro Leu Val   Glu His Ala
    10175                10180                10185

Ala Pro   Asp Asp Pro Ala Glu   Pro Gln Gly Gln His   Arg Pro Ala
    10190                10195                10200
```

```
Arg His   Ala Ala Lys Arg Pro   Arg Val Pro Ala Met   Ala Met Glu
    10205                10210                10215

Asp Pro   Pro Leu Val Pro Val   Asp His Leu Gly Ala   Glu Gln Val
    10220                10225                10230

Tyr Val   Gly Thr Ala Gln Ala   Tyr Ala His Ala Ser   Leu Gln His
    10235                10240                10245

Ser Gln   Leu Leu Gly Gly Gln   Asn His Ile Pro Gly   His Gly Glu
    10250                10255                10260

Leu Leu   Gln Asp Ser Glu Pro   Arg Arg Thr Gly Gln   Ser Ser His
    10265                10270                10275

Ile Thr   Tyr Ile Val His Gly   Gln Gly Ile Ala Ile   Arg Gln His
    10280                10285                10290

Arg Val   Ile Leu His Gln Arg   Ser Ala Gly Leu Gly   Leu Leu Thr
    10295                10300                10305

Ala Trp   Gly Gly Arg Pro Ile   Arg Val Met Ala Gly   Arg Gly Ser
    10310                10315                10320

Cys Ser   Arg Pro Cys His Asp   Ala Val Ala Phe Gly   His Phe Arg
    10325                10330                10335

Thr Cys   Cys Ser Arg Thr Trp   Ser Gly Arg Cys Thr   Pro Ile Ala
    10340                10345                10350

Gly Gly   Gly Pro Gly Ala Trp   Asn Ala Arg Cys Asn   Cys Lys Thr
    10355                10360                10365

Ala Thr   Leu Ser Asp Arg Ala   Ala Asp Leu Gly Pro   Gln Glu Arg
    10370                10375                10380

Ser His   His Ala Leu Ser His   Arg Pro Pro Trp Asn   Gly Pro Asp
    10385                10390                10395
```

```
Pro Ala   Arg Cys Asn Phe Val   Gly Phe Arg Arg Arg   Gly Arg Glu
    10400                10405                10410

Glu Gln   Glu Glu Pro Leu Thr   Phe Asn Pro Asn Gly   Leu Gly Ala
    10415                10420                10425

Leu Gln   Asn Glu Gly Arg Gly   Asp Gly Thr Ser Arg   Pro Arg Cys
    10430                10435                10440

Val Gly   Gly Lys Gln Pro Gly   Gln Arg Tyr Gly Ser   Arg Asp Val
    10445                10450                10455

Pro Arg   Trp Leu Pro Ala Lys   Pro Pro Arg Ala His   Pro Glu Thr
    10460                10465                10470

Arg Gln   Arg Lys Arg Glu Gly   Ser Leu Ile Pro Gln   Ser Ser Cys
    10475                10480                10485

Tyr Thr   Pro Ala Pro Ser Pro   Asp Asn Phe His Phe   Ser Ser Leu
    10490                10495                10500

Glu Phe   Glu Leu Val Pro Glu   Val Asn Pro Ser Gln   Pro Arg Ala
    10505                10510                10515

Arg Ala   Glu Arg Pro Pro Pro   Ala Phe Leu Ser Thr   Pro Ser Phe
    10520                10525                10530

Gln Asp   Ile Leu Leu Leu Val   His Leu Gln Gln Ile   Asp Lys Arg
    10535                10540                10545

Asn Ile   Lys Ile Ser Ala Ala   Ile Pro Lys Leu Leu   Pro Gln Gln
    10550                10555                10560

Leu Val   Leu Phe His Ile Leu   Ser Glu Ile Phe Ser   His Arg Thr
    10565                10570                10575

Thr Arg   Asn Lys Ile Arg Ala   Ser His Ser Thr Asp   Lys Pro Lys
    10580                10585                10590
```

```
Ser Ser   Pro Val Ser Ile Ala   Lys Cys Lys Thr Ala   Ile Ser Met
    10595                10600                10605

Leu Ala   Arg Pro Gly Asp Ile   Phe Gln Ile Thr Gly   Gln Lys Ile
    10610                10615                10620

Thr Gln   Ala Ile Phe Lys Lys   Ile Asn Lys Arg Lys   Ile Leu Gln
    10625                10630                10635

Val His   Val Ser Leu Gly Asn   Asn Asp Glu Val Asn   Ala Ser Gly
    10640                10645                10650

Ala Phe   Gln His Gly Leu Ala   Asp Leu Lys Thr Lys   Asn Lys Thr
    10655                10660                10665

Leu Asn   His Ala Ser Leu Ala   Asn Arg Trp Val Asn   Arg Ser Leu
    10670                10675                10680

Gln His   Gln Ala Gly His Gly   Val Ser Gly Ala Thr   Leu Val Lys
    10685                10690                10695

Ile Val   Ala Met Ile Glu Asn   His His Arg Glu Thr   Phe Pro Val
    10700                10705                10710

Ala Gly   Val Asn Asp Ser Thr   Arg Ile His Pro Arg   Asn Ile Gly
    10715                10720                10725

Val Arg   Glu Lys Lys Ala Pro   Glu Glu Ala Ile Arg   His Tyr Asn
    10730                10735                10740

Ala Gln   Ser Gln Val Gln Gln   Ser Asp Ala Met Arg   Met Lys His
    10745                10750                10755

Lys Ile   Leu Arg Cys Val Gln   Asn Val Ile Thr Pro   Leu Leu His
    10760                10765                10770

Arg Gln   Arg Ser Pro Arg Ser   Leu Gln Ile His Ile   Gln Ser Leu
    10775                10780                10785
```

```
Ser Val   His Ser Leu Pro Ser   Ser Ser Thr Gln Gln   Ala Gln Glu
    10790                10795                10800

Ser Glu   Lys Gly Ala Leu Thr   Cys Pro Pro Ala Leu   Cys Ser Ile
    10805                10810                10815

Tyr Ser   Pro Asp Leu His Arg   Lys Gly Gln Ser Leu   Lys Ile Pro
    10820                10825                10830

Ala Lys   Ser His Thr Pro Ser   Thr Arg Pro Glu Thr   Gly Asp Thr
    10835                10840                10845

Leu Lys   Lys Ile Arg Ala Leu   Pro Gln Thr Pro Lys   Leu Pro Ser
    10850                10855                10860

Phe Pro   Gly Ser His Ala Thr   Ser Ser Glu Phe Asp   Phe Gln Ile
    10865                10870                10875

Pro Ser   Thr Val Lys Asn Val   Thr Arg Pro Ala Pro   Asn Gly Arg
    10880                10885                10890

Pro Ser   Leu Gly Gln Ser Pro   Ser Ser Leu Pro Lys   Phe Lys Gln
    10895                10900                10905

Leu Ile   Cys Ile Leu Thr Arg   Thr Lys Ser Leu Arg   Tyr Ile Ile
    10910                10915                10920

Asp Asp
    10925
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His His Gln Tyr Thr Ser Asn Phe Trp Cys Ala Leu Ile Cys Lys Ala
1               5                   10                  15


Val Ile Trp Gly Gly Arg Lys Val Ile Gly Arg Glu Thr Gly Asp Arg
            20                  25                  30


Gly Arg Gly Gly Arg Phe Asp Asp Val Ala Val Arg Arg Ser Arg Phe
        35                  40                  45


Ala Ser Ser Arg Gly Lys Ser Asp Val Lys Arg Gly Val Val Thr Arg
    50                  55                  60


Lys Tyr Ser Ile Phe Pro Arg Ser Leu Thr Gly Asn Glu Val Phe Leu
65                  70                  75                  80


Gly Gly Cys Lys Lys Arg Ala Ile Phe Ala Arg Lys Leu Asn Glu Glu
                85                  90                  95


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


Gly Arg Val Asp Phe Asp Arg Leu Arg Gly Gly Phe Asp Tyr Arg Ile
        115                 120                 125


Phe His Leu Asn Phe Arg Val Arg Cys Gln Ser Pro Val Phe Leu Arg
    130                 135                 140


Thr Ile Ser Phe Pro Arg Lys Cys His Leu Thr Val Thr Ile Thr Val
145                 150                 155                 160


Leu Arg Arg Lys Leu Arg Ser Pro Asp Pro Leu Trp Cys Thr Leu Ser
                165                 170                 175


Thr Ile Cys Ser Asp Ala Ala Leu Ser Gln Tyr Leu Leu Pro Ala Cys
            180                 185                 190


Val Leu Glu Val Ala Glu Cys Ala Ser Lys Ile Ala Thr Thr Arg Gln
        195                 200                 205
```

```
Gly Leu Thr Asp Asn Cys Met Lys Asn Leu Leu Arg Val Arg Arg Phe
    210                 215                 220

Ala Leu Leu Arg Asp Val Arg Ala Arg Tyr Thr Arg His Leu Leu Thr
225                 230                 235                 240

Ser Tyr Ser Ile Thr Gly Ser Leu Val His Ser Pro Tyr Met Glu Phe
                245                 250                 255

Arg Val Thr Leu Thr Val Asn Gly Pro Pro Gly Pro Pro Asn Asp Pro
            260                 265                 270

Arg Pro Leu Thr Ser Ile Met Thr Tyr Val Pro Ile Val Thr Pro Ile
        275                 280                 285

Gly Thr Phe His Arg Gln Trp Val Glu Tyr Leu Arg Thr Ala His Leu
    290                 295                 300

Ala Val His Gln Val Tyr His Met Pro Ser Thr Pro Pro Ile Asp Val
305                 310                 315                 320

Asn Asp Gly Lys Trp Pro Ala Trp His Tyr Ala Gln Tyr Met Thr Leu
                325                 330                 335

Trp Asp Phe Pro Thr Trp Gln Tyr Ile Tyr Val Leu Val Ile Ala Ile
            340                 345                 350

Thr Met Val Met Arg Phe Trp Gln Tyr Ile Asn Gly Arg Gly Arg Phe
        355                 360                 365

Asp Ser Arg Gly Phe Pro Ser Leu His Pro Ile Asp Val Asn Gly Ser
    370                 375                 380

Leu Phe Trp His Gln Asn Gln Arg Asp Phe Pro Lys Cys Arg Asn Asn
385                 390                 395                 400

Ser Ala Pro Leu Thr Gln Met Gly Gly Arg Arg Val Arg Trp Glu Val
                405                 410                 415
```

```
Tyr Ile Ser Arg Ala Arg Leu Val Asn Arg Gln Ile Thr Arg Ser Phe
            420                 425                 430

Ile Ala Val Val Tyr His Ser Ile Ala Asn Ala Val Ser Ala Ser Asp
        435                 440                 445

Thr Thr Val Ser Asn Leu Ser Cys Arg Ser Trp Ser Gly Thr Gly Gln
    450                 455                 460

Val Ser Ile Lys Val Thr Arg Gln Val Gly Asp Gln Lys Leu Gly Leu
465                 470                 475                 480

Ser Arg Gln Arg Arg Leu Leu Arg Phe Ala Pro Ile Gly Leu Thr Asp
                485                 490                 495

Ile His Phe Ala Phe Leu Ser Thr Gly Val His Ser Gln Phe Asn Tyr
            500                 505                 510

Ser Ser Gly Ser Thr Tyr Asp Ser Leu Ala Ser Ala Thr Met Gly Ala
        515                 520                 525

Arg Ala Ser Val Leu Ser Gly Gly Glu Leu Asp Arg Trp Glu Lys Ile
    530                 535                 540

Arg Leu Arg Pro Gly Gly Lys Lys Lys Tyr Lys Leu Lys His Ile Val
545                 550                 555                 560

Trp Ala Ser Arg Glu Leu Glu Arg Phe Ala Val Asn Pro Gly Leu Leu
                565                 570                 575

Glu Thr Ser Glu Gly Cys Arg Gln Ile Leu Gly Gln Leu Gln Pro Ser
            580                 585                 590

Leu Gln Thr Gly Ser Glu Glu Leu Arg Ser Leu Tyr Asn Thr Val Ala
        595                 600                 605

Thr Leu Tyr Cys Val His Gln Arg Ile Glu Val Lys Asp Thr Lys Glu
    610                 615                 620
```

```
Ala Leu Glu Lys Ile Glu Glu Glu Gln Asn Lys Ser Lys Lys Lys Ala
625                 630                 635                 640


Gln Gln Ala Ala Ala Asp Thr Gly Asn Ser Ser Gln Val Ser Gln Asn
                645                 650                 655


Tyr Pro Ile Val Gln Asn Leu Gln Gly Gln Met Val His Gln Ala Ile
            660                 665                 670


Ser Pro Arg Thr Leu Asn Ala Trp Val Lys Val Val Glu Glu Lys Ala
        675                 680                 685


Phe Ser Pro Glu Val Ile Pro Met Phe Ser Ala Leu Ser Glu Gly Ala
    690                 695                 700


Thr Pro Gln Asp Leu Asn Thr Met Leu Asn Thr Val Gly Gly His Gln
705                 710                 715                 720


Ala Ala Met Gln Met Leu Lys Glu Thr Ile Asn Glu Glu Ala Ala Glu
                725                 730                 735


Trp Asp Arg Leu His Pro Val His Ala Gly Pro Ile Ala Pro Gly Gln
            740                 745                 750


Met Arg Glu Pro Arg Gly Ser Asp Ile Ala Gly Thr Thr Ser Thr Leu
        755                 760                 765


Gln Glu Gln Ile Gly Trp Met Thr Asn Asn Pro Pro Ile Pro Val Gly
    770                 775                 780


Glu Ile Tyr Lys Arg Trp Ile Ile Leu Gly Leu Asn Lys Ile Val Arg
785                 790                 795                 800


Met Tyr Ser Pro Thr Ser Ile Leu Asp Ile Arg Gln Gly Pro Lys Glu
                805                 810                 815


Pro Phe Arg Asp Tyr Val Asp Arg Phe Tyr Lys Thr Leu Arg Ala Glu
            820                 825                 830
```

```
Gln Ala Ser Gln Glu Val Lys Asn Trp Met Thr Glu Thr Leu Leu Val
        835                 840                 845

Gln Asn Ala Asn Pro Asp Cys Lys Thr Ile Leu Lys Ala Leu Gly Pro
    850                 855                 860

Ala Ala Thr Leu Glu Glu Met Met Thr Ala Cys Gln Gly Val Gly Gly
865                 870                 875                 880

Pro Gly His Lys Ala Arg Val Leu Ala Glu Ala Met Ser Gln Val Thr
                885                 890                 895

Asn Ser Ala Thr Ile Met Met Gln Arg Gly Asn Phe Arg Asn Gln Arg
            900                 905                 910

Lys Thr Val Lys Cys Phe Asn Cys Gly Lys Glu Gly His Ile Ala Lys
        915                 920                 925

Asn Cys Arg Ala Pro Arg Lys Lys Gly Cys Trp Lys Cys Gly Lys Glu
    930                 935                 940

Gly His Gln Met Lys Asp Cys Thr Glu Arg Gln Ala Asn Phe Leu Gly
945                 950                 955                 960

Lys Ile Trp Pro Ser His Lys Gly Arg Pro Gly Asn Phe Leu Gln Ser
                965                 970                 975

Arg Pro Glu Pro Thr Ala Pro Pro Glu Glu Ser Phe Arg Phe Gly Glu
            980                 985                 990

Glu Thr Thr Thr Pro Ser Gln Lys  Gln Glu Pro Ile Asp  Lys Glu Leu
        995                 1000                1005

Tyr Pro  Leu Ala Ser Leu Arg  Ser Leu Phe Gly Asn  Asp Pro Ser
    1010                1015                1020

Ser Gln  Ser Ser Val Thr Gly  Pro Leu Glu Ser Thr  Arg Ala Ala
    1025                1030                1035
```

```
Lys Pro  Leu Ile Ser Leu Asp  Cys Ala Phe Leu Pro  Ala Ile Cys
    1040                1045                1050

Cys Leu  Pro Leu Pro Arg Ala  Phe Leu Asp Pro Gly  Arg Cys His
    1055                1060                1065

Ser His  Cys Pro Phe Leu Ile  Lys Gly Asn Cys Ile  Ala Leu Ser
    1070                1075                1080

Glu Val  Ser Phe Tyr Ser Gly  Gly Trp Gly Gly Ala  Gly Gln Gln
    1085                1090                1095

Gly Gly  Gly Leu Gly Arg Gln  Gln Ala Cys Trp Gly  Cys Gly Gly
    1100                1105                1110

Leu Tyr  Gly Phe Gly Gly Lys  Asn Gln Gln Ile Cys  Arg Ser Glu
    1115                1120                1125

Phe Ile  Tyr Val Gly Cys Gly  Glu Arg Gly Asn Glu  Met Ala Leu
    1130                1135                1140

Trp Val  Leu Trp Val Cys Ile  Asn Glu Ser Ala Arg  Tyr Ala Gly
    1145                1150                1155

His Arg  Ala Cys Asp Leu Ala  Pro Pro Gln Asp Met  Ala Arg Val
    1160                1165                1170

Arg Ala  Gln Arg His Asp Pro  Met Gln Cys Ala Pro  Gly Val Pro
    1175                1180                1185

Pro Arg  His Val His Ala Leu  Pro Val Gln His Ala  Ile Cys Glu
    1190                1195                1200

Gly Ala  Ala Gly Ala Arg Cys  His Val Gln Ser Glu  Pro Asp Gly
    1205                1210                1215

Gly Val  His Glu Cys Gly Ala  Val Glu Asn Ser Glu  Ile Ile Gln
    1220                1225                1230
```

```
Asp Gln  Val Pro Gly Leu Arg  Met Arg Arg Gln Ala  Arg Gln Ala
    1235                 1240                 1245


Ser Ala  Arg Val Cys Gly Gly  Asp Gly Gly Pro Ala  Thr Arg Ser
    1250                 1255                 1260


Phe Gly  Val Val Leu Gln Arg  Asp Gly Val Arg Leu  Gln Arg Gly
    1265                 1270                 1275


Arg Ile  Leu Glu Val Val Phe  Gly Gly Gly Gly Gly  Leu Val Gly
    1280                 1285                 1290


Ala Glu  Leu Lys Ser Val Phe  Phe Cys Val Leu Gln  Gln His Glu
    1295                 1300                 1305


Arg Lys  Arg Leu Leu Gly Arg  Gly Ile Gln Pro Leu  Ser Asp Gly
    1310                 1315                 1320


Ala Ser  Pro Leu Leu Gly Gly  Ser Ala Ser Glu Cys  Asp Gly Ile
    1325                 1330                 1335


His Gly  Gly Arg Pro Ala Arg  Ala Ala Arg Glu Leu  Phe Asn Pro
    1340                 1345                 1350


Asp Leu  Arg Asp Pro Glu Leu  Leu Val Arg Gly Arg  Ser Cys Arg
    1355                 1360                 1365


Arg Ser  Cys Cys Phe Arg Arg  Gln Arg Arg Ala Arg  Asn Gly Pro
    1370                 1375                 1380


Gly Arg  Arg Leu Leu Gln Leu  Ser Gly Gly Gln Leu  Asp Phe His
    1385                 1390                 1395


Gln Ser  Arg Gln Pro Glu Arg  Gly Glu Ala Ala Ala  Ala Asp Gly
    1400                 1405                 1410


Pro Ala  Arg Gly Pro Asp Pro  Ala Pro Gly Arg Ala  Asp Pro Ala
    1415                 1420                 1425
```

```
Gly Gly  Ser Ala Ala Gly Gly  Asp Ala Gly Arg Gly  Cys His Gly
    1430                1435                1440


Glu Asn  Gln Ile Lys Asn Glu  Ser Ile Asn Lys Arg  Arg Arg Leu
    1445                1450                1455


Leu Ile  Leu Thr Gln Ser Leu  Glu Ser Leu Phe Asp  Phe Ser Arg
    1460                1465                1470


Ala Val  Gly Pro Gly Pro Pro  Val Ser Ile Ile Glu  His Pro Val
    1475                1480                1485


Asp Phe  Phe Gln Asp Pro Val  Glu Val Gly Leu Asp  Val Glu Val
    1490                1495                1500


His Gly  His Glu Pro Val Pro  Gly Val Glu Val Ala  Pro Leu Gln
    1505                1510                1515


Gly Leu  Val Leu Gly Gly Gly  Val Val Asn His Pro  Val Ile Ala
    1520                1525                1530


Gly Ala  Gln Gly Val Val Leu  His Asp Val Leu Glu  Glu Glu Thr
    1535                1540                1545


Asp Gly  His Gly Gln Pro Leu  Gly Val Gly Val Asp  Glu Pro Val
    1550                1555                1560


Glu Leu  Gly Gly Met His Ala  Gly Gly Asp Glu Met  His Leu Gly
    1565                1570                1575


Leu Asp  Leu Glu Ile Gly Asp  Val Pro Ala Gln Ile  Pro Pro Gly
    1580                1585                1590


Val His  Val Val Gln Asp His  Gln His Gly Val Ser  Gly Ala Leu
    1595                1600                1605


Gly Glu  Phe Val Met Gln Leu  Gly Arg Glu Gly Val  Lys Glu Phe
    1610                1615                1620
```

```
Gly Asp  Ala Leu Val Thr Ala  Gln Val Phe His Ala  Leu Ile His
    1625                1630                1635


Asp Asp  Gly Asp Gly Pro Val  Gly Gly Gly Leu Gly  Lys Asp Val
    1640                1645                1650


Ser Gly  Val Gly His Ile Val  Val Val Val Leu Gly  Glu Leu Val
    1655                1660                1665


Ile Gly  His Phe Asn Glu Phe  Gly Ala Glu Gly Ala  Arg Leu Gly
    1670                1675                1680


Asp Glu  Gly Ala Leu Asp Pro  Gly Gly Val Val Ala  Leu Ala Asp
    1685                1690                1695


Leu His  Leu Pro Gly Leu Glu  Leu Gly Gly Gly Asp  His Val His
    1700                1705                1710


Leu Arg  Gly Asp Glu Lys Asn  Gly Phe Arg Gly Gly  Gly Asp Glu
    1715                1720                1725


Leu Gly  Arg Lys Gln Val Pro  Glu Gln Leu Gly Leu  Ala Ala Ala
    1730                1735                1740


Gly Gly  Ala Val Asp Asp Pro  Asp Asp Arg Leu Gln  Val Val Val
    1745                1750                1755


Glu Gly  Glu Thr Ala Ala Val  Leu Ala Glu Glu Gly  Gly His Leu
    1760                1765                1770


Val His  His Leu Ala His Met  His Val Leu Ala His  Glu Phe Arg
    1775                1780                1785


Gln Glu  Ala Leu Ala Pro Gln  Arg Glu Glu Leu Leu  Gln Arg Gly
    1790                1795                1800


Glu Val  Phe Gln Arg Leu Glu  Pro Val Gly His Gly  His Phe Gly
    1805                1810                1815
```

```
Glu Gly  Leu Leu Gln Glu Phe  Gln Thr Val Pro Glu  Leu Gly Asp
    1820                1825                1830

Val Leu  Gly Ile Ser Ile Gln  Gln Thr Ser Ser Phe  Arg Gly Leu
    1835                1840                1845

Gly Arg  Leu Arg Glu Gly Thr  Arg Arg Trp Ala Ser  Ser Glu Ala
    1850                1855                1860

Arg Val  Arg Ser Phe Gln Gly  Arg Arg Val Arg Val  Ser Val Val
    1865                1870                1875

Ser Val  Thr Val Lys Gly Cys  Ala Pro Gly Trp Ala  Leu Ala Arg
    1880                1885                1890

Val Arg  Phe Arg Leu Ile Arg  Leu Val Glu Asn Arg  Ser Arg Ser
    1895                1900                1905

Ala Pro  Cys Ala Ser Ala Arg  Gln Leu Ser Met Ser  Ser Leu Ser
    1910                1915                1920

Ala Ser  Ala Ala Trp Pro Leu  Ala Arg Ser Leu Pro  Leu Glu Val
    1925                1930                1935

Cys Pro  Gln Thr Gly Gln Arg  Arg Asp Leu Arg Ala  Ser Leu Gly
    1940                1945                1950

Ala Arg  Lys Thr Asp Ser Gly  Ala Ala Ser Ala Pro  Gln Leu Ala
    1955                1960                1965

Gln Thr  Val Ser His Ser Thr  Ser Gln Val Arg Ser  Gly Arg Leu
    1970                1975                1980

Gly Ser  Lys Thr Arg Phe Pro  Pro Cys Phe Leu Met  Arg Phe Leu
    1985                1990                1995

Pro Leu  Val Ser Met Ser Ser  Cys Pro Arg Trp Val  Thr Lys Arg
    2000                2005                2010
```

```
Leu Ser  Val Ser Pro Thr Asp  Phe Met Gly Arg Ser  Ser Ser Gly
    2015                2020                2025

Val Pro  Arg Ser Ser Ser Arg  Asn Pro Ala His Ser  Glu Thr Lys
    2030                2035                2040

Ala Arg  Val Gln Ala Ser Thr  Lys Glu Ala Thr Trp  Glu Gly Arg
    2045                2050                2055

Ser Leu  Ser Thr Ser Gly Ser  Thr Phe Ser Arg Val  Cys Lys His
    2060                2065                2070

Met Ser  Pro Ser Ser Thr Ser  Arg Lys Val Ile Gly  Leu Val Ala
    2075                2080                2085

Thr Pro  Gly Val Pro Ala Gly  Gly Val Lys Gly Ala  Gly Pro Cys
    2090                2095                2100

Ser Ser  Ser Leu Ser Ser Gly  Ser Leu Ser Arg Ser  Ala Ser Cys
    2105                2110                2115

Trp Gly  Arg Tyr Ser Leu Ser  Lys Ala Gly Ile Thr  Ser Ala Leu
    2120                2125                2130

Arg Leu  Ser Val Ser Arg Asn  Glu Glu Asp Leu Ile  Leu Thr Val
    2135                2140                2145

Pro Leu  Glu Thr Pro Phe Met  Ser Pro Ser Ser Ile  Trp Ser Glu
    2150                2155                2160

Lys Thr  Ile Phe Leu Leu Ser  Ser Leu Val Ala Lys  Glu Pro Arg
    2165                2170                2175

Ala Leu  Glu Arg Ser Leu Ala  Met Glu Arg Met Val  Trp Phe Phe
    2180                2185                2190

Ser Leu  Ser Ala Arg Ser Leu  Ala Ala Met Leu Ser  Cys Thr Tyr
    2195                2200                2205
```

```
Ser Arg  Ala Thr His Phe His  Ser Gly Lys Thr Val  Val Ser Ser
    2210                2215                2220


Ser Gly  Thr Ile Leu Thr Arg  Gln Pro Arg Leu Cys  Arg Val Met
    2225                2230                2235


Arg Ser  Thr Leu Val Ala Thr  Ser Pro Arg Arg Gly  Ser Leu Val
    2240                2245                2250


Gln Gln  Arg Arg Pro Pro Leu  Arg Glu Gln Lys Gly  Gly Ser Gly
    2255                2260                2265


Ser Ser  Met Ser Ser Ser Gly  Gly Ser Ala Ser Thr  Val Lys Met
    2270                2275                2280


Pro Gly  Arg Ser Ser Gly Ser  Lys Leu Met Gln Val  Ser Arg Ser
    2285                2290                2295


Ser Ser  Ala Ala Cys Gln Ser  Arg Thr Ala Ser Ala  Arg Ser Gly
    2300                2305                2310


Leu Arg  Gly Val Pro Gln Gly  Met Gly Cys Val Ser  Ala Glu Ala
    2315                2320                2325


Tyr Met  Pro Gln Met Ser Thr  Arg Gly Ser Ser Arg  Thr Pro Met
    2330                2335                2340


Val Gly  Gln Arg Pro Pro Arg  Met Leu Ala Arg Thr  Ser Tyr Ser
    2345                2350                2355


Ser Cys  Glu Gly Ala Arg Ser  Pro Val Pro Arg Leu  Glu Arg Cys
    2360                2365                2370


Gly Phe  Ser Ala Arg Thr Ile  Trp Arg Lys Met Ala  Trp Glu Leu
    2375                2380                2385


Glu Glu  Met Val Gly Leu Trp  Lys Met Leu Lys Trp  Ala Trp Gly
    2390                2395                2400
```

```
Arg Pro  Thr Glu Ser Leu Met  Lys Trp Ala Glu Ser  Cys Ser Leu
    2405                 2410                 2415


Ala Thr  Ser Ser Ala Val Thr  Arg Thr Ser Arg Ala  Gln Ser Arg
    2420                 2425                 2430


Val Ser  Trp Met Met Ser Tyr  Leu Ser Trp Pro Phe  Cys Phe His
    2435                 2440                 2445


Ser Ser  Arg Leu Arg Arg Asn  Ser Ser Arg Ser Phe  Gln Tyr Ser
    2450                 2455                 2460


Ser Arg  Gly Asn Pro Ser Ser  Ala Arg Glu Pro Thr  Met Asn Trp
    2465                 2470                 2475


Leu Thr  Ala Leu Ala Gln Gln  Pro Phe Ser Thr Gly  Arg Ala Ala
    2480                 2485                 2490


Cys Ala  Ala Leu Arg Arg Glu  Val Trp Val Arg Ala  Lys Val Ser
    2495                 2500                 2505


Arg Thr  Met Thr Leu Arg Asn  Trp Cys Leu Lys Ser  Arg Ser Ser
    2510                 2515                 2520


Gln Pro  Pro Cys Ser Gln Ser  Trp Lys Ser Val Arg  Phe Leu Ala
    2525                 2530                 2535


Gly Leu  Gly Lys Ala Lys Val  Thr Ser Leu Lys Arg  Ile Leu Pro
    2540                 2545                 2550


Ala Arg  Gly Met Lys Leu Arg  Val Met Arg Lys Gly  Trp Gly Thr
    2555                 2560                 2565


Ser Ala  Arg Leu Leu Met Thr  Trp Ala Ala Arg Thr  Ile Ser Ser
    2570                 2575                 2580


Lys Pro  Leu Met Leu Cys Pro  Thr Met Ser Ser Thr  Asn Arg Gly
    2585                 2590                 2595
```

```
Arg Pro  Leu Thr Trp Gly Ser  Phe Leu Ser Ser Ser  Val Ser Ser
    2600                 2605                 2610

Ala Gly  Ser Leu Ser Pro Cys  Cys Ser Arg Ala Gln  Ser Ala Thr
    2615                 2620                 2625

Trp Gly  Leu Ala Leu Arg Lys  Glu Val Gln Arg Ser  Thr Ala Arg
    2630                 2635                 2640

Ala Val  Cys Lys Arg Ser Arg  Tyr Arg Asn Cys Trp  Pro Thr Ala
    2645                 2650                 2655

Ile Phe  Ser Gly Val Thr Gln  Lys Val Arg Gly Ser  Pro Cys Gln
    2660                 2665                 2670

Arg Ser  His Leu Ser Trp Arg  Ala Arg Ser Trp Ala  Ser Ser Thr
    2675                 2680                 2685

Ser Gly  Gly Ser Pro Glu Ser  Phe Met Thr Ser Met  Lys Gly Thr
    2690                 2695                 2700

Ser Cys  Leu Pro Lys Asp Pro  Ile Gln Val Val Ser  Thr Ser Val
    2705                 2710                 2715

Arg Lys  Ser Leu Ser Val Arg  Gly Cys Glu Pro Met  Gly Lys Asn
    2720                 2725                 2730

Trp Ile  Ser Cys His Gln Leu  Glu Glu Trp Leu Leu  Met Trp Lys
    2735                 2740                 2745

Lys Cys  Arg Arg Arg Ala Glu  His Ser Cys Leu Cys  Leu Tyr Lys
    2750                 2755                 2760

Arg Pro  Gln Cys Ser Gln Arg  Cys Thr Gly Cys Thr  Cys Cys Thr
    2765                 2770                 2775

Ser Cys  Thr Trp Val Pro Leu  Thr Arg Asn Phe Ser  Gly Gln Trp
    2780                 2785                 2790
```

```
Ser Ala  Gly Gly Cys Ile Trp  Cys Cys Thr Thr Ser  Trp Pro Ser
    2795                 2800                 2805


Ala Trp  Pro Ser Ser Ala Ser  Met Val Val Met Leu  Thr Ser Pro
    2810                 2815                 2820


Arg Gly  Arg Gln Val Gln Thr  Ser Ala Arg Thr Gly  Arg Arg Ala
    2825                 2830                 2835


Arg Thr  Arg Ala Arg Arg Pro  Glu Leu Ser Arg Val  Leu Arg Arg
    2840                 2845                 2850


Cys Gly  Val Arg Ser Val Gly  Ser Gly Gly Ala Arg  Leu Thr Cys
    2855                 2860                 2865


Arg Ser  Phe Ser Arg Ala Arg  Gly Arg Ser Arg Trp  Tyr Leu Ile
    2870                 2875                 2880


Ser Thr  Ala Pro Leu Val Ala  Thr Ser Thr Ala Cys  Arg Val Pro
    2885                 2890                 2895


Cys Pro  Trp Gly Ala Thr Thr  Val Pro Arg Phe Phe  Leu Gly Ala
    2900                 2905                 2910


Ala Ser  Met Pro Val Arg Ser  Gly Gly Glu Asp Ala  Arg Arg Ala
    2915                 2920                 2925


Ala Gly  Ala Ala Arg Asp Pro  Glu Ala Gly Ala Ala  Gly Ala Arg
    2930                 2935                 2940


Arg Arg  Arg Ala Arg Ala Gly  Ser Gly Thr Ala Pro  Gly Glu Asp
    2945                 2950                 2955


Trp Arg  Glu Arg Arg Arg Asp  Gly Arg Pro Gly Ser  Asp Ala Ser
    2960                 2965                 2970


Gly Arg  Pro Arg Asp Pro Val  Thr Lys Arg Val Arg  Gln Asn Gln
    2975                 2980                 2985
```

```
Ser Arg  Tyr Arg Arg Arg Pro  Ala Ala Gly Ser Leu  Ala Arg Arg
    2990                 2995                 3000


Pro Ser  Cys Pro Gly Arg Arg  Ser Arg Ser Thr Ala  Arg Ser Pro
    3005                 3010                 3015


Pro Pro  Glu Gly Leu Arg Gly  Arg Arg Ala Arg Arg  Trp Pro Arg
    3020                 3025                 3030


Gly Arg  Trp Arg Cys Gly Pro  Ala Ala Arg Arg Arg  Ser Cys Arg
    3035                 3040                 3045


Pro Arg  Ser Arg Arg Gly Cys  Arg Pro Arg Leu Arg  Arg Gly Arg
    3050                 3055                 3060


Ala Arg  Ala Pro Pro Gly Arg  Gly Ala Arg Arg Gly  Ala Arg Pro
    3065                 3070                 3075


Arg Ser  Cys Arg Gly Ala Gly  Arg Gly Ser Ala Trp  Trp Arg Cys
    3080                 3085                 3090


Ala Arg  Arg Arg Ser Thr Ser  Ser Gly Gly Ala Ala  Ser Arg Arg
    3095                 3100                 3105


Arg Pro  Gly Leu Pro Ser Ala  Pro Trp Pro Arg Arg  Ser Pro Arg
    3110                 3115                 3120


Arg Ser  Lys Thr Gly Ser Cys  Ala Pro Arg Arg Ser  Thr Pro Pro
    3125                 3130                 3135


Pro Glu  Asp Gly Ala Gln Arg  Trp Trp Arg Ala Pro  Arg Ala Arg
    3140                 3145                 3150


Arg Pro  Arg Gly Ala Pro Leu  Leu Pro Ser Leu Pro  Pro Pro Leu
    3155                 3160                 3165


Thr Ser  Leu Leu Leu Pro Pro  Gln Glu Ala Ala Ala  Gly Glu Gly
    3170                 3175                 3180
```

```
Pro Cys  Val Ala Gly Gly Ala  Arg Ala Asp Gly Arg  Ser Ala Arg
    3185                 3190                 3195


Trp Ser  Pro Arg Ala Gly Asp  Ala Trp Ser Arg Arg  Arg Ala Arg
    3200                 3205                 3210


Pro Arg  Gly Ala Ala Ala Arg  Arg Arg Arg Ala Ser  Pro Gly Gly
    3215                 3220                 3225


Arg Arg  Gly Gly Leu Arg Trp  Ala Gly Arg Gly Arg  Arg Cys Ile
    3230                 3235                 3240


Leu Ser  Ile Gly Pro Gly Leu  Arg Ala Arg Thr Ala  Ser Arg Asp
    3245                 3250                 3255


Pro Arg  Asp Pro Lys Thr Ala  Glu Arg Arg Leu Arg  Ala Ser Arg
    3260                 3265                 3270


Ser Arg  Lys Val Gly Ala Arg  Phe Leu Val Leu Arg  Gly Phe Arg
    3275                 3280                 3285


Glu Ala  Gly Gly Arg Cys Cys  Trp Ser Ser Arg Arg  Ser Asp Gly
    3290                 3295                 3300


Gly Trp  Trp Arg Gly Ala Pro  Gly Pro Trp Ala Arg  Leu Ala Gly
    3305                 3310                 3315


Cys Ala  Asp Gly Arg Pro Cys  Pro Arg Arg Gly Pro  Asp Thr Trp
    3320                 3325                 3330


Arg Gly  Pro Cys Ser Ser Pro  Ala Ala Ala Pro Arg  Ala Pro Pro
    3335                 3340                 3345


Pro Arg  Pro Arg Gly Arg Ala  Cys Ala Ala Arg Thr  Arg Ala Gly
    3350                 3355                 3360


Ala Gly  Arg Ala Pro Gly Arg  Arg Arg Arg Ala Arg  Arg Gly Trp
    3365                 3370                 3375
```

```
Pro Ala  Val Ser Gly Gly Trp  Ser Gly Ser Arg Arg  Ser Arg Arg
    3380                3385                3390


Ser Gly  Gly Arg Leu Arg Cys  Trp Tyr Arg Ser Ser  Trp Pro Arg
    3395                3400                3405


Thr Ser  Arg Ser Gly Gly Arg  Val Ala Arg Ala Arg  Gly Thr Gly
    3410                3415                3420


Ala Ser  Arg Arg Ala Cys Arg  Arg Cys Ser Arg Cys  Arg Cys Ala
    3425                3430                3435


Arg Gly  Thr Gly Ile Arg Arg  Gly Ser Ala Ala Ala  Ala Gly Gly
    3440                3445                3450


Arg Ala  Ala Ile Ala Arg Trp  Arg Gly Arg Arg Ala  Arg Gly Pro
    3455                3460                3465


Arg Ala  Gly Gly Gly Ser Arg  Arg Cys Thr Trp Thr  Ser Arg Cys
    3470                3475                3480


Arg Arg  Arg Trp Trp Arg Arg  Ala Gly Thr Arg Gly  Arg Gly Ser
    3485                3490                3495


Arg Cys  Cys Ala Ala Ala Gly  Ser Ser Ser Trp Trp  Pro Arg Ser
    3500                3505                3510


Gly Pro  Gly Ala Arg Ser Arg  Gly Cys Ser Arg His  Thr Gly Lys
    3515                3520                3525


Asn Glu  Ser Gly Gln Arg Leu  Asp Ser Val Ala Trp  Arg Leu Ser
    3530                3535                3540


Glu Arg  Val Gly Leu Arg Val  Tyr Pro Gly Ser Asn  Leu Glu Ser
    3545                3550                3555


Gly Trp  Ser Arg Ser Arg Gly  Thr Gly Thr Pro Val  Ser Thr Gln
    3560                3565                3570
```

```
Ala Cys  Arg Asn Leu Gln Asp  Thr Glu Ala Gly Arg  Phe Leu Ala
    3575                3580                3585


Leu Val  Ala Gly His Glu Lys  Leu Val Ser Ala Glu  Ser Asp Arg
    3590                3595                3600


Pro Arg  Trp Leu Ala Ala Val  Val Trp Arg Lys Asn  Arg Gln Gly
    3605                3610                3615


Cys Val  Ala Val Cys Pro Gly  Ser Ser Leu Ser Ala  Arg Arg Arg
    3620                3625                3630


Pro Asp  Ser Ala Ala Asn Val  Gly Val Ala Ala Pro  Ser Phe Pro
    3635                3640                3645


Arg Pro  Leu Ser Gln Pro Thr  Ser Pro Val Thr Glu  Arg Ala Pro
    3650                3655                3660


Leu Phe  Leu Val Phe Leu Pro  Asp Ala Ser Arg Thr  Ala Ala Asp
    3665                3670                3675


Ala Pro  Pro Pro Ser Thr Ser  Thr Ala Pro Thr Ala  Ala Ala Ala
    3680                3685                3690


Ala Thr  Ala Gly Ala Ser Ala  Pro Ala Pro Ala Ala  Ala Ser His
    3695                3700                3705


Tyr Arg  Gly Gly Arg Arg Glu  Arg Ser Arg Arg Ser  Val Pro Gly
    3710                3715                3720


Leu Gly  Arg Gly Arg Gly Ala  Gly Ala Ala Gly Gly  Val Val Ala
    3725                3730                3735


Gly Ala  Ala Pro Ala Arg Ala  Asp Glu Lys Gly Arg  Ser Arg Gly
    3740                3745                3750


Leu Arg  Ala Gln Ala Glu Pro  Val Gln Arg Gln Glu  Arg Arg Gly
    3755                3760                3765
```

```
Ala Arg  Gly Asp Ala Arg Leu  Pro Leu Pro Arg Gly  Ala Gly Ala
    3770                 3775                 3780


Ala Ala  Arg Pro Gly Pro Lys  Ala Gly Ala Glu Gly  Arg Gly Phe
    3785                 3790                 3795


Arg Gly  Gly Arg Ala Asp Gly  Asp Gln Pro Arg Ala  Arg Ala Arg
    3800                 3805                 3810


Gly Arg  Gly Gln Pro Gly His  Gly Val Arg Ala Asp  Arg Glu Gly
    3815                 3820                 3825


Gly Glu  Gln Leu Pro Lys Ile  Leu Gln Gln Pro Arg  Ala His Ala
    3830                 3835                 3840


Asp Arg  Ala Arg Gly Gly Asp  Pro Gly Pro Asp Ala  Pro Val Gly
    3845                 3850                 3855


Pro Ala  Gly Gly His Arg Ala  Glu Pro His Glu Gln  Ala Ala Asp
    3860                 3865                 3870


Gly Ala  Ala Val Ser Gly Gly  Ala Ala Gln Ser Gly  Gln Arg Asp
    3875                 3880                 3885


Val Gln  Gly Gly Ala Ala Glu  Tyr His Arg Ala Arg  Gly Pro Leu
    3890                 3895                 3900


Ala Pro  Gly Pro Gly Glu His  Ser Ala Glu His Arg  Gly Ala Gly
    3905                 3910                 3915


Ala Arg  Ala Ala Ala Val Arg  Glu Ala Gly Gly Tyr  Gln Leu Leu
    3920                 3925                 3930


Gly Ala  Glu Pro Gly Gln Val  Leu Arg Glu Asp Leu  Gln Asp Pro
    3935                 3940                 3945


Val Arg  Ala His Arg Gln Gly  Gly Glu Asp Arg Arg  Val Leu His
    3950                 3955                 3960
```

```
Ala His  Asp Pro Glu Ser Ala  Asp Pro Glu Arg Arg  Ser Gly Gly
    3965                3970                3975

Val Pro  Gln Arg Gln Asp Ala  Pro Arg Gly Glu Arg  Gln Pro Pro
    3980                3985                3990

Ala Arg  Ala Glu Arg Pro Gly  Ala Asp Ala Gln Pro  Ala Ala Gly
    3995                4000                4005

Pro Asp  Arg Gly Arg Asp Arg  Gly Gly Glu Leu Leu  His Gly Arg
    4010                4015                4020

Gly Pro  Ala Leu Ala Ala Gln  Pro Pro Gly Leu Gly  Ser Cys Arg
    4025                4030                4035

Arg Phe  Pro Leu Arg Gly Gly  Gly Gly Arg Gly Gly  Gly Gly Arg
    4040                4045                4050

Val Pro  Gly Arg Leu Met Ala  Arg Pro Tyr Phe Cys  Met Gln Gln
    4055                4060                4065

Gln Pro  Pro Pro Pro Asp Pro  Ala Met Arg Ala Ala  Leu Gln Ser
    4070                4075                4080

Gln Pro  Ser Gly Ile Asn Ser  Ser Asp Asp Trp Thr  Gln Ala Met
    4085                4090                4095

Gln Arg  Ile Met Ala Leu Thr  Thr Arg Asn Pro Glu  Ala Phe Arg
    4100                4105                4110

Gln Gln  Pro Gln Ala Asn Arg  Leu Ser Ala Ile Leu  Glu Ala Val
    4115                4120                4125

Val Pro  Ser Arg Ser Asn Pro  Thr His Glu Lys Val  Leu Ala Ile
    4130                4135                4140

Val Asn  Ala Leu Val Glu Asn  Lys Ala Ile Arg Gly  Asp Glu Ala
    4145                4150                4155
```

```
Gly Leu  Val Tyr Asn Ala Leu  Leu Glu Arg Val Ala  Arg Tyr Asn
    4160                4165                4170


Ser Thr  Asn Val Gln Thr Asn  Leu Asp Arg Met Val  Thr Asp Val
    4175                4180                4185


Arg Glu  Ala Val Ser Gln Arg  Glu Arg Phe His Arg  Glu Ser Asn
    4190                4195                4200


Leu Gly  Ser Met Val Ala Leu  Asn Ala Phe Leu Ser  Thr Gln Pro
    4205                4210                4215


Ala Asn  Val Pro Arg Gly Gln  Glu Asp Tyr Thr Asn  Phe Ile Ser
    4220                4225                4230


Ala Leu  Arg Leu Met Val Ala  Glu Val Pro Gln Ser  Glu Val Tyr
    4235                4240                4245


Gln Ser  Gly Pro Asp Tyr Phe  Phe Gln Thr Ser Arg  Gln Gly Leu
    4250                4255                4260


Gln Thr  Val Asn Leu Ser Gln  Ala Phe Lys Asn Leu  Gln Gly Leu
    4265                4270                4275


Trp Gly  Val Gln Ala Pro Val  Gly Asp Arg Ala Thr  Val Ser Ser
    4280                4285                4290


Leu Leu  Thr Pro Asn Ser Arg  Leu Leu Leu Leu Leu  Val Ala Pro
    4295                4300                4305


Phe Thr  Asp Ser Gly Ser Val  Ser Arg Asp Ser Tyr  Leu Gly Tyr
    4310                4315                4320


Leu Leu  Asn Leu Tyr Arg Glu  Ala Ile Gly Gln Ala  His Val Asp
    4325                4330                4335


Glu Gln  Thr Tyr Gln Glu Ile  Thr His Val Ser Arg  Ala Leu Gly
    4340                4345                4350
```

```
Gln Glu  Asp Pro Gly Asn Leu  Glu Ala Thr Leu Asn  Phe Leu Leu
    4355                4360                4365


Thr Asn  Arg Ser Gln Lys Ile  Pro Pro Gln Tyr Ala  Leu Ser Thr
    4370                4375                4380


Glu Glu  Glu Arg Ile Leu Arg  Tyr Val Gln Gln Ser  Val Gly Leu
    4385                4390                4395


Phe Leu  Met Gln Glu Gly Ala  Thr Pro Ser Ala Ala  Leu Asp Met
    4400                4405                4410


Thr Ala  Arg Asn Met Glu Pro  Ser Met Tyr Ala Arg  Asn Arg Pro
    4415                4420                4425


Phe Ile  Asn Lys Leu Met Asp  Tyr Leu His Arg Ala  Ala Ala Met
    4430                4435                4440


Asn Ser  Asp Tyr Phe Thr Asn  Ala Ile Leu Asn Pro  His Trp Leu
    4445                4450                4455


Pro Pro  Pro Gly Phe Tyr Thr  Gly Glu Tyr Asp Met  Pro Asp Pro
    4460                4465                4470


Asn Asp  Gly Phe Leu Trp Asp  Asp Val Asp Ser Ser  Val Phe Ser
    4475                4480                4485


Pro Arg  Pro Ala Thr Thr Val  Trp Lys Lys Glu Gly  Gly Asp Arg
    4490                4495                4500


Arg Pro  Ser Ser Ala Leu Ser  Gly Arg Ala Gly Ala  Ala Ala Ala
    4505                4510                4515


Val Pro  Glu Ala Ala Ser Pro  Phe Pro Ser Leu Pro  Phe Ser Leu
    4520                4525                4530


Asn Ser  Val Arg Ser Ser Glu  Leu Gly Arg Leu Thr  Arg Pro Arg
    4535                4540                4545
```

```
Leu Leu  Gly Glu Glu Glu Tyr  Leu Asn Asp Ser Leu  Leu Arg Pro
    4550                4555                4560

Glu Arg  Glu Lys Asn Phe Pro  Asn Asn Gly Ile Glu  Ser Leu Val
    4565                4570                4575

Asp Lys  Met Ser Arg Trp Lys  Thr Tyr Ala His Glu  His Arg Asp
    4580                4585                4590

Glu Pro  Arg Ala Ser Ser Ser  Ala Gly Thr Arg Arg  Arg Gln Arg
    4595                4600                4605

His Asp  Arg Gln Arg Gly Leu  Val Trp Asp Asp Glu  Asp Ser Ala
    4610                4615                4620

Asp Asp  Ser Ser Val Leu Asp  Leu Gly Gly Ser Gly  Gly Gly Asn
    4625                4630                4635

Pro Phe  Ala His Leu Arg Pro  Arg Ile Gly Arg Leu  Met Glu Ser
    4640                4645                4650

Glu Lys  Ile Lys Asn Gly Thr  His Gln Gly His Gly  Asp Gln Arg
    4655                4660                4665

Ala Phe  Phe Ser Val Val Cys  Ser Ser Met Met Arg  Arg Val Tyr
    4670                4675                4680

Pro Glu  Gly Pro Pro Pro Ser  Tyr Glu Ser Val Met  Gln Gln Ala
    4685                4690                4695

Val Ala  Ala Ala Met Gln Pro  Pro Leu Glu Ala Pro  Tyr Val Pro
    4700                4705                4710

Pro Arg  Tyr Leu Ala Pro Thr  Glu Gly Arg Asn Ser  Ile Arg Tyr
    4715                4720                4725

Ser Glu  Leu Ala Pro Leu Tyr  Asp Thr Thr Arg Leu  Tyr Leu Val
    4730                4735                4740
```

```
Asp Asn  Lys Ser Ala Asp Ile  Ala Ser Leu Asn Tyr  Gln Asn Asp
    4745                4750                4755


His Ser  Asn Phe Leu Thr Thr  Val Val Gln Asn Asn  Asp Phe Thr
    4760                4765                4770


Pro Thr  Glu Ala Ser Thr Gln  Thr Ile Asn Phe Asp  Glu Arg Ser
    4775                4780                4785


Arg Trp  Gly Gly Gln Leu Lys  Thr Ile Met His Thr  Asn Met Pro
    4790                4795                4800


Asn Val  Asn Glu Phe Met Tyr  Ser Asn Lys Phe Lys  Ala Arg Val
    4805                4810                4815


Met Val  Ser Arg Lys Thr Pro  Asn Gly Val Ala Val  Asp Glu Asn
    4820                4825                4830


Tyr Asp  Gly Ser Gln Asp Glu  Leu Thr Tyr Glu Trp  Val Glu Phe
    4835                4840                4845


Glu Leu  Pro Glu Gly Asn Phe  Ser Val Thr Met Thr  Ile Asp Leu
    4850                4855                4860


Met Asn  Asn Ala Ile Ile Asp  Asn Tyr Leu Ala Val  Gly Arg Gln
    4865                4870                4875


Asn Gly  Val Leu Glu Ser Asp  Ile Gly Val Lys Phe  Asp Thr Arg
    4880                4885                4890


Asn Phe  Arg Leu Gly Trp Asp  Pro Val Thr Glu Leu  Val Met Pro
    4895                4900                4905


Gly Val  Tyr Thr Asn Glu Ala  Phe His Pro Asp Ile  Val Leu Leu
    4910                4915                4920


Pro Gly  Cys Gly Val Asp Phe  Thr Glu Ser Arg Leu  Ser Asn Leu
    4925                4930                4935
```

```
Leu Gly  Ile Arg Lys Arg Gln  Pro Phe Gln Glu Gly  Phe Gln Ile
    4940                4945                4950

Leu Tyr  Glu Asp Leu Glu Gly  Gly Asn Ile Pro Ala  Leu Leu Asp
    4955                4960                4965

Val Glu  Ala Tyr Glu Lys Ser  Lys Glu Glu Ala Ala  Ala Ala Ala
    4970                4975                4980

Thr Ala  Ala Val Ala Thr Ala  Ser Thr Glu Val Arg  Gly Asp Asn
    4985                4990                4995

Phe Ala  Ser Ala Ala Ala Val  Ala Glu Ala Ala Glu  Thr Glu Ser
    5000                5005                5010

Lys Ile  Val Ile Gln Pro Val  Glu Lys Asp Ser Lys  Asp Arg Ser
    5015                5020                5025

Tyr Asn  Val Leu Ala Asp Lys  Lys Asn Thr Ala Tyr  Arg Ser Trp
    5030                5035                5040

Tyr Leu  Ala Tyr Asn Tyr Gly  Asp Pro Glu Lys Gly  Val Arg Ser
    5045                5050                5055

Trp Thr  Leu Leu Thr Thr Ser  Asp Val Thr Cys Gly  Val Glu Gln
    5060                5065                5070

Val Tyr  Trp Ser Leu Pro Asp  Met Met Gln Asp Pro  Val Thr Phe
    5075                5080                5085

Arg Ser  Thr Arg Gln Val Ser  Asn Tyr Pro Val Val  Gly Ala Glu
    5090                5095                5100

Leu Leu  Pro Val Tyr Ser Lys  Ser Phe Phe Asn Glu  Gln Ala Val
    5105                5110                5115

Tyr Ser  Gln Gln Leu Arg Ala  Phe Thr Ser Leu Thr  His Val Phe
    5120                5125                5130
```

```
Asn Arg  Phe Pro Glu Asn Gln  Ile Leu Val Arg Pro  Pro Ala Pro
    5135                5140                5145

Thr Ile  Thr Thr Val Ser Glu  Asn Val Pro Ala Leu  Thr Asp His
    5150                5155                5160

Gly Thr  Leu Pro Leu Arg Ser  Ser Ile Arg Gly Val  Gln Arg Val
    5165                5170                5175

Thr Val  Thr Asp Ala Arg Arg  Arg Thr Cys Pro Tyr  Val Tyr Lys
    5180                5185                5190

Ala Leu  Gly Val Val Ala Pro  Arg Val Leu Ser Ser  Arg Thr Phe
    5195                5200                5205

Lys Met  Ser Ile Leu Ile Ser  Pro Ser Asn Asn Thr  Gly Trp Gly
    5210                5215                5220

Leu Arg  Ala Pro Ser Lys Met  Tyr Gly Gly Ala Arg  Gln Arg Ser
    5225                5230                5235

Thr Gln  His Pro Val Arg Val  Arg Gly His Phe Arg  Ala Pro Trp
    5240                5245                5250

Gly Ala  Leu Lys Gly Arg Val  Arg Ser Arg Thr Thr  Val Asp Asp
    5255                5260                5265

Val Ile  Asp Gln Val Val Ala  Asp Ala Arg Asn Tyr  Thr Pro Ala
    5270                5275                5280

Ala Ala  Pro Ala Ser Thr Val  Asp Ala Val Ile Asp  Ser Val Val
    5285                5290                5295

Ala Asp  Ala Arg Arg Tyr Ala  Arg Ala Lys Ser Arg  Arg Arg Arg
    5300                5305                5310

Ile Ala  Arg Arg His Arg Ser  Thr Pro Ala Met Arg  Ala Ala Arg
    5315                5320                5325
```

```
Ala Leu  Leu Arg Arg Ala Arg  Arg Thr Gly Arg Arg  Ala Met Leu
    5330                5335                5340


Arg Ala  Ala Arg Arg Ala Ala  Ser Gly Ser Ser Ser  Ala Gly Arg
    5345                5350                5355


Thr Arg  Arg Arg Ala Ala Thr  Ala Ala Ala Ala Ala  Ile Ala Ser
    5360                5365                5370


Met Ser  Arg Pro Arg Arg Gly  Asn Val Tyr Trp Val  Arg Asp Ala
    5375                5380                5385


Ala Thr  Gly Val Arg Val Pro  Val Arg Thr Arg Pro  Pro Arg Thr
    5390                5395                5400


Arg Cys  Leu Arg Asp Val Asp  Val Ser Gln Arg Arg  Gly Gly Cys
    5405                5410                5415


Pro Ser  Ala Asn Thr Arg Lys  Arg Cys Ser Arg Ser  Ser Arg Leu
    5420                5425                5430


Arg Ser  Thr Ala Pro Arg Arg  Arg Lys Glu Ser Pro  Ala Asn Ser
    5435                5440                5445


Gly Ser  Lys Arg Thr Lys Arg  Arg Arg Lys Met Trp  Thr Asp Trp
    5450                5455                5460


Trp Ser  Leu Cys Ala Ser Ser  Pro Pro Gly Gly Ala  Cys Ser Gly
    5465                5470                5475


Ala Gly  Gly Lys Asn Arg Cys  Cys Gly Pro Ala Pro  Arg Trp Ser
    5480                5485                5490


Ser Arg  Pro Ala Ser Val Pro  Ala Pro Pro Pro Ser  Ala Pro Thr
    5495                5500                5505


Thr Arg  Cys Thr Gly Thr Arg  Thr Ser Ser Ser Arg  Arg Ser Ser
    5510                5515                5520
```

```
Val Trp  Ala Ser Leu Leu Thr  Ala Ser Ala Ala Ala  Pro Arg Pro
    5525                5530                5535


Lys Arg  Arg Arg Cys Pro Ser  Arg Trp Thr Thr Ala  Thr Pro Arg
    5540                5545                5550


Arg Ala  Ser Arg Pro Cys Ser  Arg Cys Cys Arg Ala  Arg Arg Arg
    5555                5560                5565


Ala Gly  Ala Ser Ser Ala Arg  Ala Ala Arg Ile Cys  Thr Arg Pro
    5570                5575                5580


Cys Ser  Trp Cys Pro Ser Ala  Arg Ser Trp Arg Thr  Cys Trp Ser
    5585                5590                5595


Thr Arg  Trp Thr Pro Arg Cys  Ser Pro Arg Ser Arg  Cys Gly Pro
    5600                5605                5610


Ser Ser  Arg Trp Pro Arg Ala  Trp Ala Cys Arg Pro  Trp Thr Ser
    5615                5620                5625


Arg Ser  Pro Arg Ser Pro Trp  Lys Arg Arg Pro Ser  Pro Ser Pro
    5630                5635                5640


Ala Pro  Ala Pro Trp Arg Cys  Arg Arg Ile Pro Gly  Cys Arg Arg
    5645                5650                5655


Arg Leu  Pro Pro Leu Ala Glu  Asp Ala Ser Thr Ala  Arg Pro Ala
    5660                5665                5670


Cys Cys  Pro Thr Thr Arg Cys  Ile Leu Pro Ser Ser  Pro Arg Arg
    5675                5680                5685


Ala Thr  Ala Ala Arg Ala Ser  Thr Ala Ala Thr Pro  Ala Ala Ala
    5690                5695                5700


Ala Arg  Pro Pro Pro Ala Ala  Ala Val Val Ala Pro  Ala Ala Ala
    5705                5710                5715
```

```
Ala Pro  Arg Leu Pro Pro Pro  Pro Trp Cys Gly Glu  Cys Thr Ala
    5720                5725                5730

Ala Gly  Ala Ser Leu Pro Cys  Arg Ala Arg Ala Thr  Thr Arg Ala
    5735                5740                5745

Ser Pro  Phe Asn Ser Ala Val  Ala Ser Tyr Leu Gln  Ile Trp Pro
    5750                5755                5760

Ser His  Ala Ala Ser Ala Ser  Pro Leu Arg Ala Thr  Glu Glu Glu
    5765                5770                5775

Ser Arg  Ala Val Glu Gly Arg  Gly Thr Gly Cys Val  Ala Ile Thr
    5780                5785                5790

Thr Gly  Gly Gly Ala Pro Ser  Ala Ser Gly Trp Gly  Glu Ala Ser
    5795                5800                5805

Cys Pro  Arg Ser Pro Ser Ser  Pro Arg Arg Ser Gly  Arg Ser Pro
    5810                5815                5820

Ala Leu  Pro Trp Arg Cys Arg  Pro Leu Ser Ala Thr  Glu Thr Gln
    5825                5830                5835

Leu Gly  Lys Phe Val Ile Lys  Lys Trp Thr Asp Ala  Pro Gly Pro
    5840                5845                5850

Val Met  Cys Val Phe Arg Trp  Lys Thr Ser Ile Phe  Arg Pro Trp
    5855                5860                5865

His Arg  Asp Thr Ala Arg Gly  Arg Leu Trp Ala Pro  Gly Ala Thr
    5870                5875                5880

Ser Ala  Thr Ala Asn Thr Gly  Ala Pro Ser Ile Gly  Ala Val Ser
    5885                5890                5895

Gly Ala  Gly Leu Arg Ile Ser  Gly Pro Arg Ser Lys  Pro Met Ala
    5900                5905                5910
```

```
Thr Arg  Arg Gly Thr Ala Ala  Gln Gly Arg Arg Gly  Lys Ser Lys
    5915                5920                5925


Ser Arg  Thr Ser Ser Arg Arg  Trp Ser Met Ala Trp  Pro Arg Ala
    5930                5935                5940


Ser Thr  Gly Trp Trp Thr Trp  Pro Thr Arg Pro Cys  Arg Asn Arg
    5945                5950                5955


Ser Thr  Ala Ala Trp Thr Arg  Ser Arg Pro Arg Gly  Pro Trp Arg
    5960                5965                5970


Cys Pro  Arg Trp Arg Arg Ser  Cys Leu Pro Trp Thr  Ser Ala Ala
    5975                5980                5985


Thr Ser  Asp Arg Val Pro Thr  Arg Arg Arg Arg Cys  Arg Thr Arg
    5990                5995                6000


Thr Ser  Arg Pro Arg Thr Arg  Arg Arg Asn Trp Val  Cys Pro Pro
    6005                6010                6015


Arg Gly  Pro Trp Arg Leu Trp  Pro Pro Gly Cys Asn  Pro Ala Ala
    6020                6025                6030


Ala Ala  Ser Pro Arg Pro Trp  Thr Cys Leu Arg Leu  Leu Pro Ala
    6035                6040                6045


Pro Pro  Gln Trp Leu Ser Pro  Cys Arg Arg Trp Pro  Ser Arg Arg
    6050                6055                6060


Ala Pro  Pro Glu Ala Ala Pro  Arg Arg Thr Gly Arg  Ala Leu Thr
    6065                6070                6075


Ala Ser  Trp Val Trp Glu Cys  Arg Val Ser Ala Ala  Ala Ala Ile
    6080                6085                6090


Lys Arg  His Cys Ser Ala Leu  Ala Cys Leu Cys Val  Tyr Val Cys
    6095                6100                6105
```

```
Pro Pro  Thr Arg Arg Arg Lys  Arg Arg Val Ala Glu  Leu Gln Asp
    6110                 6115                 6120

Gly His  Pro Ile Asp Ala Ala  Pro Val Gly Val His  Ala His Arg
    6125                 6130                 6135

Arg Thr  Gly Arg Phe Gly Val  Pro Glu Ser Gly Ser  Gly Ala Val
    6140                 6145                 6150

Arg Pro  Arg His Arg His Leu  Leu Gln Ser Gly Glu  Gln Val Glu
    6155                 6160                 6165

Pro His  Gly Gly Ala His Ala  Arg Cys Asp His Arg  Pro Gln Pro
    6170                 6175                 6180

Ala Ala  Asp Ala Ala Leu Arg  Ala Arg Gly Pro Arg  Gly Gln His
    6185                 6190                 6195

Leu Leu  Val Gln Ser Ala Leu  His Ala Gly Arg Gly  Arg Gln Pro
    6200                 6205                 6210

Arg Ala  Gly His Gly Gln His  Leu Leu His Pro Arg  Arg Ala Gly
    6215                 6220                 6225

Ser Gly  Ala Gln Leu Gln Thr  Leu Leu Arg His Arg  Leu Gln Gln
    6230                 6235                 6240

Pro Gly  Ser Gln Gly Ser Ala  Gln His Leu Pro Val  Asp Ile Ser
    6245                 6250                 6255

Trp Tyr  Tyr Arg Lys Asn Leu  Tyr Ile Trp Lys Cys  Thr Cys Ala
    6260                 6265                 6270

Arg His  His Tyr Lys Gly Trp  Tyr Ser Thr Trp Asn  Gln Arg Trp
    6275                 6280                 6285

Ser Gly  Asn Leu Cys Arg Arg  Asn Leu Ser Thr Arg  Ala Ser Ser
    6290                 6295                 6300
```

```
Gly Cys  Met Ala His His Trp  Tyr Lys Ile Trp Arg  Gln Ser Ser
    6305                6310                6315

Ala His  Gln Asn Glu Ala Leu  Leu Trp Phe Phe Cys  Gln Ala Tyr
    6320                6325                6330

Gln Arg  Arg Arg Pro Gly Lys  Cys Glu Asn Arg Asn  Arg Arg Tyr
    6335                6340                6345

Gln Arg  Ile His His Gly Ile  Leu Arg Ser Lys Cys  Ser Cys Arg
    6350                6355                6360

Arg Pro  Ser Pro Arg Asn Cys  Phe Val Tyr Glu Cys  Gly Ser Gly
    6365                6370                6375

Asn Ser  Arg Tyr Pro Tyr Cys  Ile Gln Gly Arg Tyr  Arg Gln Leu
    6380                6385                6390

Phe Tyr  Gln Phe Gly Ser Ala  Val His Ala Gln Gln  Thr Gln Leu
    6395                6400                6405

His Trp  Leu Gln Arg Gln Leu  Tyr Arg Ser Asp Val  Leu Gln Gln
    6410                6415                6420

His Trp  Gln Tyr Gly Cys Thr  Gly Trp Thr Gly Leu  Pro Ala Glu
    6425                6430                6435

Cys Cys  Gly Gly Leu Ala Gly  Gln Lys His Arg Thr  Val Leu Pro
    6440                6445                6450

Ala Leu  Ala Leu Ser Gly Gln  Asn Gln Val Phe Gln  Tyr Val Glu
    6455                6460                6465

Ser Gly  Gly Gly Gln Leu Pro  Arg Cys Ala His Tyr  Lys Ser Arg
    6470                6475                6480

Cys Gly  Gly Thr Ser Leu Leu  Leu Pro Pro Gly Cys  Cys Gly Asn
    6485                6490                6495
```

```
Tyr Leu  Pro Gly Asn Gly Gln  Trp Ser Asn His Leu  Asp Gln Arg
    6500                6505                6510

Tyr Cys  Cys Ile Gly Gln Gly  Gln Ser Phe Arg His  Gly Asp Gln
    6515                6520                6525

His Pro  Gly Gln Pro Val Ala  Glu Leu Pro Leu Arg  Glu Arg Gly
    6530                6535                6540

Ala Val  Pro Ala Arg Leu Leu  Gln Val His Ala Gly  Gln His His
    6545                6550                6555

Ala Ala  His Gln His Gln His  Leu Arg Leu His Glu  Arg Pro Arg
    6560                6565                6570

Gly Gly  Ala Leu Ala Gly Gly  Arg Leu His Gln His  Arg Gly Ala
    6575                6580                6585

Leu Val  Ala Gly Pro His Gly  Gln Arg Gln Pro Leu  Gln Pro Pro
    6590                6595                6600

Pro Gln  Arg Gly Pro Ala Ile  Pro Leu His Ala Pro  Gly Gln Arg
    6605                6610                6615

Ala Leu  Arg Ala Leu Pro His  Pro Gly Ala Pro Lys  Val Phe Arg
    6620                6625                6630

His Gln  Glu Pro Pro Ala Pro  Ala Arg Val Leu His  Leu Arg Val
    6635                6640                6645

Glu Leu  Pro Gln Gly Arg Gln  His Asp Pro Ala Glu  Leu Pro Arg
    6650                6655                6660

Gln Arg  Pro Ala His Gly Arg  Gly Leu His Arg Leu  His Gln His
    6665                6670                6675

Gln Pro  Leu Arg His Leu Leu  Pro His Gly Ala Gln  His Arg Leu
    6680                6685                6690
```

```
His Ala  Arg Gly His Ala Ala  Gln Arg His Gln Arg  Pro Val Leu
    6695                6700                6705

Gln Arg  Leu Pro Leu Gly Gly  Gln His Ala Leu Pro  His Pro Gly
    6710                6715                6720

Gln Arg  His Gln Arg Ala His  Leu His Pro Leu Ala  Gln Leu Gly
    6725                6730                6735

Arg Leu  Pro Arg Leu Val Leu  His Ala Pro Gln Asp  Pro Arg Asp
    6740                6745                6750

Ala Leu  Ala Arg Leu Arg Val  Arg Pro Leu Leu Arg  Leu Leu Gly
    6755                6760                6765

Leu His  Pro Leu Pro Arg Arg  His Leu Leu Pro Gln  Pro His Leu
    6770                6775                6780

Gln Glu  Gly Leu His His Leu  Arg Leu Leu Arg Gln  Leu Ala Arg
    6785                6790                6795

Gln Arg  Pro Pro Pro Asp Ala  Gln Arg Val Arg Asn  Gln Ala His
    6800                6805                6810

Arg Arg  Arg Arg Gly Val Gln  Arg Gly Pro Val Gln  His Asp Gln
    6815                6820                6825

Gly Leu  Val Pro Gly Pro Asp  Ala Gly Pro Leu Gln  His Arg Leu
    6830                6835                6840

Pro Gly  Leu Leu Arg Ala Arg  Gly Leu Gln Gly Pro  His Val Leu
    6845                6850                6855

Leu Leu  Pro Gln Leu Pro Ala  His Glu Pro Pro Gly  Arg Gly Arg
    6860                6865                6870

Gly Gln  Leu Gln Gly Leu Pro  Gly Arg His Pro Gly  Leu Pro Ala
    6875                6880                6885
```

```
Gln Gln  Leu Gly Leu Arg Arg  Leu Pro Arg Ala His  His Ala Pro
    6890                6895                6900


Gly Pro  Ala Leu Pro Arg Gln  Leu Pro Leu Pro Ala  His Arg Gln
    6905                6910                6915


Glu Arg  Arg Arg Gln Arg His  Pro Glu Lys Val Pro  Leu Arg Pro
    6920                6925                6930


Gly His  Val Ala His Pro Leu  Leu Gln Gln Leu His  Val His Gly
    6935                6940                6945


Arg Ala  His Arg Pro Arg Pro  Glu His Ala Leu Arg  Gln Leu Arg
    6950                6955                6960


Pro Arg  Ala Arg His Glu Phe  Arg Ser Arg Pro His  Gly Val His
    6965                6970                6975


Pro Ser  Leu Cys Cys Leu Arg  Ser Leu Arg Arg Arg  Pro Ser Ala
    6980                6985                6990


Pro Ala  Pro Pro Arg Arg His  Arg Gly Arg Leu Pro  Ala His Ala
    6995                7000                7005


Leu Leu  Gly Arg Gln Arg His  His Leu Ser Leu Leu  Leu Leu Ala
    7010                7015                7020


Arg Arg  Pro Ala Arg Ala Pro  Ala Ser Arg Ser Ser  Gly Pro Ser
    7025                7030                7035


Ser Ala  Thr Trp Ala Ala Gly  Pro Ala Ser Trp Ala  Pro Ser Thr
    7040                7045                7050


Ser Ala  Ser Arg Asp Ser Trp  Pro Arg Thr Ser Trp  Pro Ala Pro
    7055                7060                7065


Ser Ser  Thr Arg Pro Ala Ala  Arg Pro Gly Ala Ser  Thr Gly Trp
    7070                7075                7080
```

```
Pro Ser  Pro Gly Thr Arg Ala  Pro Thr Pro Ala Thr  Ser Ser Thr
    7085                 7090                 7095


Pro Ser  Gly Ser Arg Thr Ser  Ala Ser Ser Arg Ser  Thr Ser Ser
    7100                 7105                 7110


Ser Thr  Arg Ala Cys Cys Val  Ala Ala Pro Trp Pro  Pro Arg Thr
    7115                 7120                 7125


Ala Ala  Ser Pro Trp Lys Ser  Pro Pro Arg Pro Cys  Arg Val Arg
    7130                 7135                 7140


Ala Arg  Pro Pro Ala Gly Ser  Ser Ala Ala Cys Ser  Cys Thr Pro
    7145                 7150                 7155


Ser Cys  Thr Gly Pro Thr Ala  Pro Trp Thr Arg Thr  Pro Pro Thr
    7160                 7165                 7170


Cys Arg  Gly Cys Pro Thr Ala  Cys Ser Ser Arg Pro  Arg Trp Asn
    7175                 7180                 7185


Pro Pro  Cys Ala Ala Thr Arg  Arg Arg Ser Thr Ala  Ser Ser Thr
    7190                 7195                 7200


Pro Thr  Pro Pro Thr Phe Ala  Pro Thr Ala Arg Ala  Ser Arg Arg
    7205                 7210                 7215


Pro Pro  Pro Ser Thr Ala Ile  Lys Thr Cys Asn Pro  Val Cys Val
    7220                 7225                 7230


Cys Glu  Cys Phe Ile His His  Asn Lys Gln His Met  Phe Met Pro
    7235                 7240                 7245


Pro Ser  Leu Arg Leu Leu Tyr  Leu Glu Ile Glu Gly  Val Leu Pro
    7250                 7255                 7260


Ala Leu  Gly Met Ala Arg Gly  Gln Gly Tyr Val Ala  Glu Leu Val
    7265                 7270                 7275
```

```
Leu Gly  Gln Pro Leu Glu Leu  Gly Asp Gln Gln Leu  Arg His Gly
    7280                 7285                 7290


Glu Val  Gly Glu Arg Val Ala  Pro Gln Leu Ala Arg  Glu Leu Gln
    7295                 7300                 7305


Gly Ala  Gln Gln Val Gly Arg  Gly Asp Leu Glu Ile  Ala Val Gly
    7310                 7315                 7320


Thr Arg  Val Leu Arg Ala Arg  Val Thr Val His Gly  Val Ala Ala
    7325                 7330                 7335


Leu Glu  His His Gln Gly Arg  Val Leu His Ala Arg  Gln His Arg
    7340                 7345                 7350


Arg Val  Gly Asp Ala Leu His  Val Gln Ile Leu Gly  Val Gly His
    7355                 7360                 7365


Pro Glu  Gly Gly His Leu Ala  Gly Leu Pro Pro His  Ala Gly His
    7370                 7375                 7380


Ala Ala  Gly Leu Val Val Ala  Ile Ala Val Gln Gly  Asp Gln His
    7385                 7390                 7395


His Leu  Gly Leu Leu Gly Ala  His Ala Arg Val His  Gly Leu His
    7400                 7405                 7410


Glu Ser  Leu Gln Leu Ala Glu  Gly Leu Leu Arg Leu  Ala Ala Leu
    7415                 7420                 7425


Gly Glu  Glu Asp Pro Ala Gly  Leu Ala Arg Glu Leu  Val Gly Gly
    7430                 7435                 7440


Ala Ala  Ser Val Val His Ala  Ala Ala Arg Val Val  Val Gly Gln
    7445                 7450                 7455


Leu His  His Ala Ala Pro Pro  Ala Val Leu Gly Asp  Leu Gly Pro
    7460                 7465                 7470
```

```
Val Gly  Val Leu Leu Gln Arg  Ala Leu Pro Val Leu  Ala Arg His
    7475                 7480                 7485


Ile His  Leu Asp Arg Val Leu  Leu Leu Asp His His  Gly Pro Val
    7490                 7495                 7500


Gln Ala  Pro Gln Leu Ala Leu  Gly Leu Gly Ala Pro  Val Gln Pro
    7505                 7510                 7515


Gln Arg  Ala Ala Gly Ala Leu  Pro Val Leu Val Gly  Asp Leu Gly
    7520                 7525                 7530


Val Arg  Val His Glu Ala Leu  Gln Glu Ala Ala His  His Arg Gly
    7535                 7540                 7545


Gln Gly  Leu Val Ala Gly Glu  Gly Gln Arg Asn Ala  Ala Val Leu
    7550                 7555                 7560


Leu Val  His Ile Gln Val Ala  Asp Thr Ala Val His  Leu Ala Leu
    7565                 7570                 7575


Leu Gly  His Gln Leu Glu Gly  Gly Leu Gln Val Ala  Leu His Ala
    7580                 7585                 7590


Val Pro  Val His Gln Gln Arg  His His Phe His Ala  Leu Leu Pro
    7595                 7600                 7605


Gly Arg  Asn Asp Arg Gln Ala  Gln Gly Val Leu His  Arg Cys His
    7610                 7615                 7620


Leu Ser  Arg Arg Arg Arg Ser  Gln Gly Val Val Leu  Val Gln Gly
    7625                 7630                 7635


Leu Lys  His Ser Leu Ala Val  Leu Leu Gly Asp Ala  His Gly Gly
    7640                 7645                 7650


Lys Ala  Glu Ala His Gly Arg  Gln Leu Leu Leu Gly  Leu Pro Phe
    7655                 7660                 7665
```

```
Val Leu  Ala Val Leu Ala Asp  Val Leu Gln Arg His  Met Leu Gly
    7670                 7675                 7680


Leu Ala  Gly Phe Leu Phe Gly  Arg Gln Arg Arg Arg  Arg Arg Arg
    7685                 7690                 7695


Ala Gly  Arg Ala Arg Val Leu  Ala His His Asp Tyr  Phe Phe Ser
    7700                 7705                 7710


Leu Ala  Val Val Arg Asp His  Ala Ala Val Gly Met  Pro Leu Leu
    7715                 7720                 7725


Gly Gln  Arg Arg Arg Arg Arg  Ala Leu Ala Val Arg  Arg Ala Ala
    7730                 7735                 7740


Gly Arg  Ala Pro Ser Ala Phe  Gly Gly Ala Leu Leu  Ala Ala Leu
    7745                 7750                 7755


Leu Leu  Thr Ser Ser Ala Ala  Gly His Cys Val Leu  Leu Gly Ser
    7760                 7765                 7770


Lys His  Gly Asp Ser Ala Ile  Val Ala Asn Ile Ala  Ile Cys Pro
    7775                 7780                 7785


Arg Arg  Arg Arg Arg Glu Pro  Ala Ala Ala Glu Lys  Leu Asn Arg
    7790                 7795                 7800


Pro Ala  Ala Gln Pro His Leu  Arg Arg Arg Ser Pro  Arg His Ala
    7805                 7810                 7815


Arg Asp  Gly Gly Ile His Arg  Asp Pro Gly Leu Arg  Asp Ala Arg
    7820                 7825                 7830


Gly Ala  Arg Gly Gly Ala Gly  Ser Ala Leu Phe Ser  Pro Gly Arg
    7835                 7840                 7845


Glu Pro  Pro Arg Ala Ala Arg  Ala Gly Ser Arg Glu  Arg Ala Glu
    7850                 7855                 7860
```

```
Pro Gly  Trp Ala Arg Ala Trp  Arg Leu Pro Glu Arg  Gly Arg Gly
    7865                7870                7875

Arg Ala  His Gln Ala Ser Gly  Pro Pro Met His His  Arg Gln Gly
    7880                7885                7890

Arg Ala  Ala Arg Pro Arg Arg  Gly Ala Pro Gln Arg  Gly Gly Ala
    7895                7900                7905

Gln Pro  Arg Leu Arg Ala Gln  Pro Leu Leu Ala Ala  Arg Ala Pro
    7910                7915                7920

Gln Ala  Pro Ala Gln Arg His  Leu Arg Ala Gln Pro  Ala Pro Gln
    7925                7930                7935

Leu Leu  Pro Gly Leu Arg Gly  Ala Arg Gly Pro Gly  His Leu Pro
    7940                7945                7950

Pro Leu  Phe Gln Glu Pro Lys  Asp Pro Arg Leu Leu  Pro Arg Gln
    7955                7960                7965

Pro His  Pro Arg Arg Arg Pro  Ala Gln Pro Gly Pro  Arg Arg Pro
    7970                7975                7980

Pro Thr  Tyr Arg Leu Leu Gly  Arg Gly Ser Gln Asp  Leu Arg Gly
    7985                7990                7995

Ser Gly  Gln Arg Arg Asp Ser  Gly Arg Glu Arg Ser  Ala Arg Lys
    8000                8005                8010

Arg Arg  Gly Ala Ala Pro Gln  Arg Pro Gly Gly Val  Gly Arg Arg
    8015                8020                8025

Gln Arg  Ala Pro Gly Gly Pro  Gln Ala His Gly Arg  Ala Asp Pro
    8030                8035                8040

Leu Arg  Leu Pro Gly Ala Gln  Pro Ala Pro Gln Gly  His Glu Arg
    8045                8050                8055
```

```
Arg His  Gly Pro Gly Ala His  Gln Ala Arg Leu Ala  Pro Leu Gly
    8060                 8065                 8070

Gly Gly  Asp Ala Gly Pro Arg  Glu Leu Gly Arg Gly  Gln Ala Arg
    8075                 8080                 8085

Gly Gln  Arg Arg Ala Ala Gly  Ala Leu Ala Gly Ser  Glu His Pro
    8090                 8095                 8100

Pro Glu  Pro Gly Arg Ala Ala  Gln Ala His Asp Gly  Arg Gly Pro
    8105                 8110                 8115

Gly Asp  Arg Gly Ala Gly Val  Ser Ala Pro Leu Leu  Arg Arg Arg
    8120                 8125                 8130

Gly Asp  Pro Ala Gln Gly Arg  Gly Glu Pro Ala Leu  Pro Leu Gln
    8135                 8140                 8145

Thr Arg  Val Arg Ala Pro Gly  Leu Gln Asp Leu Gln  Arg Gly Ala
    8150                 8155                 8160

Asp Gln  Pro Gly Leu Leu His  Gly His Pro Ala Arg  Glu Pro Pro
    8165                 8170                 8175

Gly Ala  Glu Arg Ala Ala His  His Pro Ala Arg Gly  Gly Pro Pro
    8180                 8185                 8190

Arg Leu  His Pro Arg Leu Arg  Leu Pro Val Pro Leu  Pro His Leu
    8195                 8200                 8205

Ala Asp  Gly His Gly Arg Val  Ala Ala Val Pro Gly  Gly Ala Glu
    8210                 8215                 8220

Pro Glu  Arg Ala Leu Gln Ala  Pro Ala Glu Glu Pro  Gln Gly Pro
    8225                 8230                 8235

Val Asp  Arg Val Arg Arg Ala  His His Arg Arg Gly  Pro Gly Arg
    8240                 8245                 8250
```

```
Pro His  Leu Pro Arg Ala Pro  Ala Ala Asp Ala Ala  Gln Arg Ala
    8255                8260                8265

Ala Arg  Leu Tyr Glu Pro Lys  His Val Ala Lys Leu  Ser Leu Phe
    8270                8275                8280

His Pro  Arg Thr Leu Arg Asp  Pro Ala Arg His Leu  Leu Arg Ala
    8285                8290                8295

Ala Leu  Gly Leu Arg Ala Ala  Asp Leu Pro Arg Val  Pro Pro Ala
    8300                8305                8310

Ala Leu  Glu Pro Leu Leu Pro  Ala Ala Pro Gly Gln  Leu Pro Gly
    8315                8320                8325

Leu Pro  Leu Gly Arg Asp Arg  Gly Arg Gln Arg Arg  Gly Pro Ala
    8330                8335                8340

Arg Val  Pro Leu Pro Leu Gln  Pro Leu His Ala Ala  Pro Leu Pro
    8345                8350                8355

Gly Leu  Gln Pro Pro Ala Ala  Glu Arg Asp Pro Asp  His Arg His
    8360                8365                8370

Leu Arg  Val Ala Arg Pro Arg  Arg Gly Gln Gly Gly  Ser Glu Thr
    8375                8380                8385

His Pro  Gly Ala Val Asp Leu  Gly Leu Leu Ala Gln  Val Arg Ala
    8390                8395                8400

Arg Gly  Leu Pro Ser Leu Arg  Asp Gln Val Leu Arg  Gly Pro Ile
    8405                8410                8415

Pro Ala  Ala Gln Gly Arg Ala  Val Gly Leu Arg His  His Pro Gly
    8420                8425                8430

Gly His  Pro Gly Pro Ile Ala  Ser His Pro Glu Ile  Pro Pro Arg
    8435                8440                8445
```

```
Ile Ser  Ala Glu Lys Gly Pro  Arg Gly Leu Leu Gly  Pro Pro Asp
    8450                8455                8460


Arg Arg  Gly Ala Gln Pro Gln  Leu Pro Pro Gly Cys  Pro Glu Glu
    8465                8470                8475


Ala Ala  Arg Ser Lys Trp Ser  Cys Arg Arg Arg Arg  Arg Ile Trp
    8480                8485                8490


Arg Lys  Thr Gly Arg Ala Val  Arg Gln Arg Arg Arg  Arg Trp Lys
    8495                8500                8505


Thr Gly  Thr Ala Leu Arg Gln  Arg Arg Thr Ala Cys  Lys Thr Val
    8510                8515                8520


Trp Arg  Arg Lys Thr Arg Trp  Arg Arg Gln Arg Lys  Lys Gln Pro
    8525                8530                8535


Pro Pro  Asp Arg Arg Pro Arg  Arg Arg Arg Arg Lys  Gln Ala Ala
    8540                8545                8550


Arg Ile  Pro Ser Pro Leu Arg  Val Gly Val Ala Ala  Ala Gly Pro
    8555                8560                8565


Thr Val  Asp Gly Thr Arg Pro  Gly Ala Ser Arg Thr  Pro Pro Pro
    8570                8575                8580


Arg Pro  Val Arg Arg Ser Gly  Arg Asp Thr Ser Pro  Gly Gly Gly
    8585                8590                8595


Thr Lys  Thr Pro Ser Ser Pro  Ala Cys Lys Pro Ala  Gly Ala Thr
    8600                8605                8610


Ser Pro  Ser Pro Gly Ala Thr  Cys Ser Ser Thr Ala  Gly Thr Ser
    8615                8620                8625


Pro Ala  Thr Ser Cys Ile Thr  Thr Val Thr Ser Thr  Ala Pro Thr
    8630                8635                8640
```

```
Thr Val  Ser Lys Lys Arg Gln  Lys Pro Ser Ser Ser  Ser Ser Ser
    8645                 8650                 8655

Arg Lys  Pro Ala Ala Ala Ala  Arg Lys Ser Thr Ala  Ala Ala Gly
    8660                 8665                 8670

Gly Leu  Arg Ile Ala Ala Asn  Glu Pro Ala Gln Thr  Arg Glu Leu
    8675                 8680                 8685

Arg Asn  Arg Ile Phe Pro Thr  Leu Tyr Ala Ile Phe  Gln Gln Ser
    8690                 8695                 8700

Arg Gly  Gln Glu Gln Glu Leu  Lys Val Lys Asn Arg  Ser Leu Arg
    8705                 8710                 8715

Ser Leu  Thr Arg Ser Cys Leu  Tyr His Lys Ser Glu  Asp Gln Leu
    8720                 8725                 8730

Gln Arg  Thr Leu Glu Asp Ala  Glu Ala Leu Phe Asn  Lys Tyr Cys
    8735                 8740                 8745

Ala Leu  Thr Leu Lys Glu Pro  Ala Pro Ala His Thr  Arg Lys Lys
    8750                 8755                 8760

Ala Gly  Ile Thr Ser Pro Pro  Ala Pro Phe Ala Arg  Pro Ser Ser
    8765                 8770                 8775

Ala Lys  Arg Phe Pro Arg Leu  Thr Cys Gly Ala Thr  Ser Pro Arg
    8780                 8785                 8790

Trp Ala  Trp Pro Pro Ala Pro  Pro Arg Thr Thr Pro  Pro Ala Thr
    8795                 8800                 8805

Gly Ser  Val Pro Gly Pro Arg  Ser His Gly Met Thr  Ser Ala Pro
    8810                 8815                 8820

Thr Glu  Thr Arg Tyr Ser Asn  Ser Gln Arg Ser Pro  Pro Arg Pro
    8825                 8830                 8835
```

```
Ala Ile  Thr Leu Ile Arg Val  Ile Gly Pro Pro Pro  Trp Cys Thr
    8840                8845                8850

Arg Lys  Phe Pro Ser Pro Arg  Pro Tyr Tyr Phe Arg  Glu Thr Pro
    8855                8860                8865

Arg Pro  Lys Ser Ser Leu Thr  Gln Val Ser Ser Trp  Pro Ala Ala
    8870                8875                8880

Pro Pro  Cys Val Val Thr Ala  Pro Leu Arg Val Ser  Gly Trp Ser
    8885                8890                8895

Glu Ala  Glu Ala His Ser Ser  Thr Thr Arg Trp Ala  Leu Arg Trp
    8900                8905                8910

Val Cys  Asp Leu Thr Glu Ser  Ser Asn Ser Pro Asp  Arg Gly Asp
    8915                8920                8925

Leu Pro  Ser Arg Leu Val Arg  Pro Ser Leu Trp Arg  Val Arg Pro
    8930                8935                8940

Arg Ser  Pro Ala Arg Val Ala  Ser Ala Leu Ser Ser  Ser Trp Arg
    8945                8950                8955

Ser Ser  Leu Pro Arg Ser Thr  Ser Thr Pro Ser Pro  Ala Pro Pro
    8960                8965                8970

Ala Thr  Thr Arg Thr Ser Ser  Ser Arg Thr Ser Thr  Pro Ser Ala
    8975                8980                8985

Ser Arg  Trp Thr Ala Thr Ile  Glu Cys Pro Met Val  Ala Arg Leu
    8990                8995                9000

Thr Leu  Gly Phe Asp Thr Trp  Thr Thr Ala Ala Ala  Ser Ala Ala
    9005                9010                9015

Ser Leu  Gly Ile Ser Pro Ser  Leu Pro Thr Leu Ser  Cys Pro Arg
    9020                9025                9030
```

```
Ser Thr  Leu Arg Ala Arg Pro  Thr Glu Cys Gly Ser  Ser Ser Lys
    9035                9040                9045


Gly Val  Ser Thr Pro Thr Cys  Phe Gly Ser Ser Ala  Ser Val Arg
    9050                9055                9060


Ser Trp  Pro Ser Ala Ser Lys  Asp Arg Pro Phe Pro  Cys Thr Ala
    9065                9070                9075


Ser Ala  Thr Thr Pro Ala Cys  Met Lys Val Phe Val  Val Cys Cys
    9080                9085                9090


Val Leu  Ser Ile Ile Lys Ala  Glu Ile Ser Asp Tyr  Ser Gly Leu
    9095                9100                9105


Pro Cys  Val Pro Ala Ile Asn  Gln Ser Leu Phe Phe  Thr Gly Asn
    9110                9115                9120


Glu Thr  Glu Leu Gln Leu Gln  Cys Lys Pro His Lys  Lys Tyr Leu
    9125                9130                9135


Thr Trp  Leu Phe Gln Gly Ser  Pro Ile Ala Val Val  Asn His Cys
    9140                9145                9150


Asp Asn  Asp Gly Val Leu Leu  Ser Gly Pro Ala Asn  Leu Thr Phe
    9155                9160                9165


Ser Thr  Arg Arg Ser Lys Leu  Gln Leu Phe Gln Pro  Phe Leu Pro
    9170                9175                9180


Gly Thr  Tyr Gln Cys Val Ser  Gly Pro Cys His His  Thr Phe His
    9185                9190                9195


Leu Ile  Pro Asn Thr Thr Ala  Ser Leu Pro Ala Thr  Asn Asn Gln
    9200                9205                9210


Thr Thr  His Gln Arg His Arg  Arg Asp Arg Gly His  Val Gln Ser
    9215                9220                9225
```

```
Ser Arg  Ser Thr Arg Pro Gln  Tyr Met Pro Ile Leu  Asp Tyr Glu
    9230                9235                9240

Ala Glu  Pro Gln Arg Pro Met  Leu Pro Ala Ile Ser  Tyr Phe Asn
    9245                9250                9255

Leu Thr  Gly Gly Asp Asp Pro  Thr Gly Gln Gln Gln  Arg Gln Arg
    9260                9265                9270

Pro Ser  Pro Gly His Gly Arg  Pro Arg Leu Gly Ala  Ala Thr Arg
    9275                9280                9285

Pro Thr  Ser His Ser Pro Ala  Ala Gly Glu Ser Arg  Gln Gly Ala
    9290                9295                9300

Ala Gly  Arg His Ser His Pro  Pro Val Gln Glu Arg  His Leu Leu
    9305                9310                9315

Pro Gly  Glu Thr Gly Gln Asp  Leu Leu Arg Gly His  Pro Asp Arg
    9320                9325                9330

Pro Ser  Pro Leu Leu Arg Ala  Pro Ala Ala Ala Pro  Glu Val His
    9335                9340                9345

Leu Pro  Gly Arg Ser Gln Pro  His Arg His His Pro  Ala Val Gly
    9350                9355                9360

Arg Tyr  Gln Gly Val His Pro  Leu Leu Leu Arg Leu  Pro Arg Leu
    9365                9370                9375

Arg Pro  His Ser Asp Gln Asp  Pro Leu Arg Pro Pro  Arg Pro Pro
    9380                9385                9390

Pro His  Glu Leu Ile Thr Pro  Leu Ser Ser Glu Ile  Asn Ile Ile
    9395                9400                9405

Leu Met  Met Ile Ile Lys Asn  Asn His Leu Ile Asn  Lys Asp Thr
    9410                9415                9420
```

```
Ile Ile  Leu Met Ile Val Leu  Lys Asn Lys Glu Ser  Leu Thr Asn
    9425                9430                9435


Leu Ile  Pro Gly Leu Cys Pro  Cys Phe Leu Pro Thr  Pro Pro His
    9440                9445                9450


Ser Pro  Leu Pro Ser Ser Gly  Thr Ala Asp Pro Gly  Gly Leu Gln
    9455                9460                9465


Thr Ser  Ser Thr Arg Arg Gly  Cys Gln Ile Pro Pro  Val Pro Gln
    9470                9475                9480


Ser Ser  Phe Tyr Leu Leu Ser  Asp Val Gln Lys Ala  Arg Pro Gly
    9485                9490                9495


Gly Leu  Arg Pro Arg Leu Pro  Leu Arg Cys Arg Gln  Arg Thr Asp
    9500                9505                9510


Arg Ala  Leu His Gln Pro Pro  Leu Arg Leu Phe Arg  Trp Ile Pro
    9515                9520                9525


Arg Glu  Ala Pro Gly Gly Ala  Val Pro Ala Thr Gly  Pro Arg His
    9530                9535                9540


His Gln  Glu Arg Gly Asn His  Pro Gln Ala Gly Arg  Gly Gly Gly
    9545                9550                9555


Pro Arg  Leu Leu Gly Lys Thr  His Leu Gln His Gly  His Gln Gly
    9560                9565                9570


Arg Arg  Pro Ser Gln Phe Phe  Gln Gln His His Phe  Pro His Gly
    9575                9580                9585


Tyr Pro  Ser Leu Tyr Gln Arg  Trp Lys Ile Ile Leu  Thr Ser Phe
    9590                9595                9600


Ser Thr  Val Lys His Ile Lys  Ile Asn His Ser Glu  His Ile Ser
    9605                9610                9615
```

```
Cys Ser  Leu Trp Ile Arg Phe  Arg Thr Glu Trp Trp  His Cys Ser
    9620                 9625                 9630

Cys Ser  Thr Val Gly Leu Ser  Thr His Phe Lys Arg  Lys Tyr Asn
    9635                 9640                 9645

Pro Ser  Gln Trp Ser Ile Asn  Ser Cys Lys Ser Thr  Tyr Gln Leu
    9650                 9655                 9660

Gln Lys  Arg Gly His Cys His  Tyr Leu Arg Arg Cys  Asn Lys Gln
    9665                 9670                 9675

His Lys  Leu Ala Arg Tyr Lys  Ile Arg Trp His Ser  Cys Lys His
    9680                 9685                 9690

Trp Gln  Arg Ile Gly Ile Trp  Asn His Tyr Arg Asp  Cys His Arg
    9695                 9700                 9705

Cys Ile  Pro Asn Ser Ser Ile  Gly Tyr Trp Pro Tyr  Leu Gln Tyr
    9710                 9715                 9720

Arg Arg  His Cys Cys Leu Glu  Gln Arg Gly Thr Tyr  Ile Met Asp
    9725                 9730                 9735

His Ser  Arg Pro Leu Ala Lys  Leu Gln Asn Ile Leu  Lys Arg Cys
    9740                 9745                 9750

Gln Thr  His Thr Leu Leu Asp  Lys Val Trp Lys Ser  Asn Ser Gly
    9755                 9760                 9765

Tyr Cys  Asp Cys Ile Gly Ser  Glu Trp Lys Ser Gln  Pro Asn His
    9770                 9775                 9780

Lys His  Ser Lys His Cys Thr  Arg Leu Pro Gln Val  Cys Lys Trp
    9785                 9790                 9795

Ser Phe  Ala Lys Gln Leu His  Ile Arg Gln Arg Ile  Leu Glu Leu
    9800                 9805                 9810
```

```
Gln Lys  Gly Arg Cys Tyr Thr  Cys Ala Leu Tyr Cys  Tyr Arg Phe
    9815                 9820                 9825


Tyr Ala  His Lys Gly Leu Ser  Lys His Ile Cys Ser  Phe Lys Lys
    9830                 9835                 9840


Pro Tyr  Cys Gln Ser Ser Leu  Ser Gln Trp Gly Gly  Gln Thr Thr
    9845                 9850                 9855


Asp Ala  Asp Tyr Tyr Phe Asn  Gly Cys Asn Leu His  Leu Gln Tyr
    9860                 9865                 9870


His Phe  Ser Met Glu Met Gly  Tyr Val His Arg Asn  Thr Cys Tyr
    9875                 9880                 9885


Gln Leu  Leu His Leu Leu Leu  His Arg Pro Arg Met  Asn Thr Val
    9890                 9895                 9900


Ser His  Pro Ala Cys Gln Pro  Phe Pro Pro His Ser  Val Tyr Gly
    9905                 9910                 9915


Lys Asn  Ser Glu Ala Gln Asn  Lys Ile Lys Phe Lys  Cys Phe Ile
    9920                 9925                 9930


Asp Ser  Thr Val Leu Gln Asp  Ser Ser Ser Tyr Phe  Ser Ser Thr
    9935                 9940                 9945


Leu Pro  Gly His Gly Ile His  His Pro Leu Pro Pro  His Ser Leu
    9950                 9955                 9960


Glu His  Leu Asn Ala Ile Gly  Asp Gly His Ala Phe  Gly Leu His
    9965                 9970                 9975


Val Pro  His Ser Phe Arg Ala  Ser Gln Ser Arg Val  Gly Gln Gly
    9980                 9985                 9990


Asp Glu  Thr Leu Arg Ala Leu   Pro His Leu His Leu   Thr Ala Gln
    9995                 10000                 10005
```

```
Gln Leu   Arg Ile Val Leu Gly   Gly Arg Asp His Gly   Tyr Leu Glu
    10010                 10015                 10020

Glu Ala   Glu Glu Arg Arg Trp   Glu Ser Ser Ala Asn   Gly Ile Gly
    10025                 10030                 10035

Arg Trp   Cys Arg Ile Arg Pro   Arg Ser Ser Arg Cys   Arg Arg Arg
    10040                 10045                 10050

Ser Val   Lys Leu Leu Leu Arg   Gly Ser Gly Ser Arg   Asp Ser Leu
    10055                 10060                 10065

Ser Met   Met Pro Thr Ala Leu   Ser Ile Ser Arg Leu   Val Arg Arg
    10070                 10075                 10080

Ala Gln   Gln Arg Met Arg Ile   Ser Leu Arg Ser Leu   Gln Tyr Val
    10085                 10090                 10095

Gln His   Arg Thr Thr Arg Leu   Phe Asn Ser Pro Phe   Asn Thr Leu
    10100                 10105                 10110

Gln Pro   Lys Leu Ile Ala Gly   Arg Met Leu Pro Thr   Trp Pro Ser
    10115                 10120                 10125

Tyr Gln   Ile Leu Arg Ile Lys   Trp Arg Ser Leu Gln   Asn Thr Leu
    10130                 10135                 10140

Pro Thr   Tyr Met Ile Ser Leu   Gly Met Trp Arg Phe   Thr Thr Ser
    10145                 10150                 10155

Arg Tyr   His Ile Thr Leu Trp   Leu Asn Met Gln Pro   Arg Met Ile
    10160                 10165                 10170

Leu Arg   Asn His Arg Ala Ser   Thr Ala Pro Pro Ala   Met Gln Arg
    10175                 10180                 10185

Arg Asp   Pro Gly Ser Arg Gln   Trp Gln Trp Arg Thr   His Arg Ser
    10190                 10195                 10200
```

```
Tyr Pro   Trp Ile Ile Trp Glu   Leu Asn Lys Ser Met   Leu Ala Gln
    10205                 10210                 10215

His Arg   His Met Leu Met His   Leu Phe Ser Thr Leu   Ser Ser Ser
    10220                 10225                 10230

Gly Val   Lys Thr Ile Ser Gln   Gly Thr Gly Asn Ser   Cys Arg Thr
    10235                 10240                 10245

Ala Asn   Pro Ala Glu Gln Gly   Asn Pro Arg Thr Leu   Thr Leu Cys
    10250                 10255                 10260

Met Asp   Arg Val Ser Gln Ser   Gly Ser Thr Gly Ser   Ser Thr Arg
    10265                 10270                 10275

Glu Ala   Arg Val Ser Val Ser   Ser Gln Arg Gly Lys   Gly Ala Gly
    10280                 10285                 10290

Arg Tyr   Gly Trp Arg Asp Ala   Ala Asp Arg Val Arg   Asp Arg Val
    10295                 10300                 10305

Met Met   Gln Leu Leu Ser Asp   Ile Phe Val Leu Ala   Val Ala Glu
    10310                 10315                 10320

Pro Gly   Pro Gly Ala Ala His   Arg Ser Pro Ala Ala   Val Pro Ala
    10325                 10330                 10335

Leu Gly   Thr Leu Gly Val Glu   Ile Val Lys Gln Pro   Leu Ser Gln
    10340                 10345                 10350

Thr Val   Gln Gln Ile Gly Leu   Arg Ser Asp Glu Asp   Pro Ile Met
    10355                 10360                 10365

Pro Asp   Ser Ser Asp His Ile   Asp His Arg Gly Met   Gly Gln Thr
    10370                 10375                 10380

Gln Pro   Asp Asp Ala Ile Leu   Leu Gly Phe Gly Asp   Gly Gly Gly
    10385                 10390                 10395
```

```
Gly Lys   Asn Arg Lys Asn His   Asp Leu Leu Ile Gln   Thr Val Ser
    10400                 10405                 10410


Glu His   Phe Lys Met Lys Val   Ala Glu Met Ala Pro   Leu Ala Pro
    10415                 10420                 10425


Ala Val   Leu Val Glu Asn Asn   Ser Gln Val Lys Gly   Asp Thr Val
    10430                 10435                 10440


Leu Glu   Met Phe His Gly Gly   Phe Gln Gln Ser Leu   His Ala His
    10445                 10450                 10455


Ile Gln   Lys Gln Asp Asn Ser   Glu Ser Gly Arg Val   Leu Phe Leu
    10460                 10465                 10470


Asn His   His Val Thr Leu Leu   His His Pro Gln Ile   Ile Phe Ile
    10475                 10480                 10485


Phe Pro   Ala Leu Asn Asp Ser   Asn Phe Leu Arg Ile   Gln Ala Ser
    10490                 10495                 10500


His Asp   Lys Glu Leu Ala Gln   Ser Ala Leu His Arg   His Ser Ala
    10505                 10510                 10515


His Pro   His Asn Ser Lys Ile   Phe Cys Ser Trp Phe   Thr Cys Ser
    10520                 10525                 10530


Arg Leu   Thr Ser Gly Ile Ser   Lys Ser Leu Pro Arg   Ser Leu Ser
    10535                 10540                 10545


Ser Ser   Leu Ser Asn Asn Cys   Lys Tyr Ser Phe Ile   Ser Ser Pro
    10550                 10555                 10560


Lys Phe   Leu Ala Ile Gly Pro   Pro Gly Ile Arg Leu   Gly Gln Ala
    10565                 10570                 10575


Thr Val   Gln Ile Asn Arg Ser   Pro Pro Gln Ala Leu   Pro Asn Ala
    10580                 10585                 10590
```

```
Arg Leu   Leu Ala Cys Trp Leu   Asp Pro Val Ile Ser   Ser Arg Leu
    10595                 10600                 10605

Asp Arg   Lys Ser Pro Arg Gln   Phe Leu Arg Lys Ser   Thr Lys Glu
    10610                 10615                 10620

Lys Ser   Ser Arg Cys Thr Phe   Arg Ala Ser Gly Thr   Thr Met Lys
    10625                 10630                 10635

Met Gln   Ala Val Arg Ser Ser   Met Val Ser Leu Ile   Cys Lys Lys
    10640                 10645                 10650

Gln Lys   Ile Lys His Thr Met   Leu Ala Trp Arg Thr   Gly Gly Ile
    10655                 10660                 10665

Val Leu   Ser Ser Thr Arg Gln   Ala Thr Gly Ser Pro   Ala Arg Pro
    10670                 10675                 10680

Ser Lys   Leu Ser Leu Leu Lys   Thr Ile Thr Glu Arg   Arg Ser Arg
    10685                 10690                 10695

Trp Pro   Ala Met Ile Arg Gln   Asp Glu Tyr Thr Pro   Gly Thr Leu
    10700                 10705                 10710

Ala Ser   Ala Ser Glu Lys Lys   Arg Pro Arg Lys Gln   Gly Thr Thr
    10715                 10720                 10725

Met Leu   Ser Leu Lys Ser Ser   Lys Ala Met Pro Cys   Gly Ser Thr
    10730                 10735                 10740

Lys Ser   Ser Gly Ala Tyr Lys   Met Leu Leu Pro Ser   Cys Thr Gly
    10745                 10750                 10755

Ser Glu   Ala Pro Asp Pro Ser   Arg Tyr Thr Tyr Lys   Ala Ser Ala
    10760                 10765                 10770

Ser Ile   Ala Tyr Arg Ala Ala   Ala His Asn Arg Arg   Lys Ser Gln
    10775                 10780                 10785
```

```
Arg Lys   Ala Glu Leu Pro Val   His Pro Leu Ser Ala   Gln Tyr Ile
    10790                 10795                 10800


Ala Gln   Ile Tyr Thr Asp Val   Lys Ala Lys Val Lys   Tyr Pro Pro
    10805                 10810                 10815


Asn Asn   His Thr Arg Pro Ala   His Ala Gln Lys Pro   Val Thr His
    10820                 10825                 10830


Ser Lys   Lys Tyr Ala His Phe   Leu Lys Arg Pro Asn   Cys Arg His
    10835                 10840                 10845


Phe Arg   Val Pro Thr Leu Arg   His Arg Asn Ser Thr   Phe Lys Phe
    10850                 10855                 10860


Arg Arg   Pro Leu Lys Thr Ser   Pro Ala Pro Pro Leu   Thr Val Ala
    10865                 10870                 10875


Arg Leu   Ser Ala Asn His Leu   Pro Pro Ser Pro Asn   Ser Asn Ser
    10880                 10885                 10890


Ser Phe   Ala Tyr Arg Ala Pro   Lys Val Gly Ile Leu   Leu Met Met
    10895                 10900                 10905


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His His Gln Tyr Thr Ser Asn Phe Trp Cys Ala Leu Ile Cys Lys Ala
1               5                  10                  15


Val Ile Trp Gly Gly Arg Lys Val Ile Gly Cys Gly Ser Gly Asp Arg
            20                  25                  30


Gly Arg Gly Gly Arg Phe Asp Asp Val Ala Met Arg Arg Ser Arg Phe
        35                  40                  45
```

```
Ala Ser Ser Arg Gly Lys Ser Asp Val Lys Arg Gly Val Val Thr Arg
    50                  55                  60

Lys Tyr Ser Ile Phe Pro Arg Ser Leu Thr Gly Asn Glu Val Phe Leu
65                  70                  75                  80

Gly Gly Cys Lys Lys Arg Ala Ile Phe Ala Arg Lys Leu Asn Glu Glu
                85                  90                  95

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

Gly Arg Val Asp Phe Asp Arg Leu Arg Gly Gly Phe Asp Tyr Arg Ile
        115                 120                 125

Phe His Leu Asn Phe Arg Val Arg Cys Gln Ser Pro Val Phe Leu Arg
    130                 135                 140

Thr Ile Ser Phe Pro Arg Lys Cys His Leu Thr Val Thr Ile Thr Val
145                 150                 155                 160

Leu Arg Arg Lys Leu Arg Ser Pro Asp Pro Leu Trp Cys Thr Leu Ser
                165                 170                 175

Thr Ile Cys Ser Asp Ala Ala Leu Ser Gln Tyr Leu Leu Pro Ala Cys
            180                 185                 190

Val Leu Glu Val Ala Glu Cys Ala Ser Lys Ile Ala Thr Thr Arg Gln
        195                 200                 205

Gly Leu Thr Asp Asn Cys Met Lys Asn Leu Leu Arg Val Arg Arg Phe
    210                 215                 220

Ala Leu Leu Arg Asp Val Arg Ala Arg Tyr Thr Arg His Leu Leu Thr
225                 230                 235                 240

Ser Met Pro Ser Thr Pro Pro Ile Asp Val Asn Asp Gly Lys Trp Pro
                245                 250                 255
```

```
Ala Trp His Tyr Ala Gln Tyr Met Thr Leu Trp Asp Phe Pro Thr Trp
            260                 265                 270

Gln Tyr Ile Tyr Val Leu Val Ile Ala Ile Thr Met Val Met Arg Phe
        275                 280                 285

Trp Gln Tyr Ile Asn Gly Arg Gly Arg Phe Asp Ser Arg Gly Phe Pro
    290                 295                 300

Ser Leu His Pro Ile Asp Val Asn Gly Ser Leu Phe Trp His Gln Asn
305                 310                 315                 320

Gln Arg Asp Phe Pro Lys Cys Arg Asn Asn Ser Ala Pro Leu Thr Gln
                325                 330                 335

Met Gly Gly Arg Arg Val Arg Trp Glu Val Tyr Ile Ser Arg Ala Arg
            340                 345                 350

Leu Val Asn Arg Gln Ile Thr Arg Ser Phe Ile Ala Val Val Tyr His
        355                 360                 365

Ser Ile Ala Asn Ala Val Ser Ala Ser Asp Thr Thr Val Ser Asn Leu
    370                 375                 380

Arg Leu Glu Tyr Leu Ile Arg Leu Thr Ile Gly Leu Arg Leu Glu Phe
385                 390                 395                 400

Asp Ala Thr Met Arg Val Met Gly Ile Leu Arg Ser Tyr Gln Gln Trp
                405                 410                 415

Trp Ile Trp Gly Ile Leu Gly Phe Trp Met Leu Met Ile Cys Asn Val
            420                 425                 430

Trp Gly Asn Leu Trp Val Thr Val Tyr Tyr Gly Val Pro Val Trp Lys
        435                 440                 445

Glu Ala Lys Thr Thr Leu Phe Cys Ala Ser Asp Ala Lys Ala His Lys
    450                 455                 460
```

```
Glu Glu Val His Asn Ile Trp Ala Thr His Ala Cys Val Pro Thr Asp
465                 470                 475                 480

Pro Asn Pro Gln Glu Ile Val Leu Lys Asn Val Thr Glu Asn Phe Asn
                485                 490                 495

Met Trp Lys Asn Asp Met Val Asp Gln Met His Glu Asp Ile Ile Ser
            500                 505                 510

Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu Cys
        515                 520                 525

Val Thr Leu Asn Cys Ser Asp Val Lys Ile Lys Gly Thr Asn Ala Thr
    530                 535                 540

Tyr Asn Asn Ala Thr Tyr Asn Asn Asn Asn Thr Ile Ser Asp Met Lys
545                 550                 555                 560

Asn Cys Ser Phe Asn Thr Thr Thr Glu Ile Thr Asp Lys Lys Lys Lys
                565                 570                 575

Glu Tyr Ala Leu Phe Tyr Lys Leu Asp Val Val Ala Leu Asp Gly Lys
            580                 585                 590

Glu Thr Asn Ser Thr Asn Ser Ser Glu Tyr Arg Leu Ile Asn Cys Asn
        595                 600                 605

Thr Ser Ala Val Thr Gln Ala Cys Pro Lys Val Ser Phe Asp Pro Ile
    610                 615                 620

Pro Ile His Tyr Cys Ala Pro Ala Gly Tyr Ala Ile Leu Lys Cys Asn
625                 630                 635                 640

Asn Lys Thr Phe Asn Gly Thr Gly Pro Cys Asn Asn Val Ser Thr Val
                645                 650                 655

Gln Cys Thr His Gly Ile Lys Pro Val Val Ser Thr Gln Leu Leu Leu
            660                 665                 670
```

```
Asn Gly Ser Leu Ala Glu Glu Glu Val Val Ile Arg Phe Glu Asn Leu
        675                 680                 685

Thr Asn Asn Ala Lys Ile Ile Ile Val His Leu Asn Glu Ser Val Glu
    690                 695                 700

Ile Asn Cys Thr Arg Pro Ser Asn Asn Thr Arg Lys Ser Val Arg Ile
705                 710                 715                 720

Gly Pro Gly Gln Thr Phe Phe Ala Thr Gly Asp Ile Ile Gly Asp Ile
                725                 730                 735

Arg Gln Ala His Cys Asn Ile Ser Arg Lys Lys Trp Asn Thr Thr Leu
            740                 745                 750

Gln Arg Val Lys Glu Lys Leu Lys Glu Lys Phe Pro Asn Lys Thr Ile
        755                 760                 765

Gln Phe Ala Pro Ser Ser Gly Gly Asp Leu Glu Ile Thr Thr His Ser
    770                 775                 780

Phe Asn Cys Arg Gly Glu Phe Phe Tyr Cys Tyr Thr Ser Asp Leu Phe
785                 790                 795                 800

Asn Ser Thr Tyr Met Ser Asn Asn Thr Gly Gly Ala Asn Ile Thr Leu
                805                 810                 815

Gln Cys Arg Ile Lys Gln Ile Ile Arg Met Trp Gln Gly Val Gly Gln
            820                 825                 830

Ala Met Tyr Ala Pro Pro Ile Ala Gly Asn Ile Thr Cys Lys Ser Asn
        835                 840                 845

Ile Thr Gly Leu Leu Leu Thr Arg Asp Gly Gly Lys Glu Lys Asn Asp
    850                 855                 860

Thr Glu Thr Phe Arg Pro Gly Gly Gly Asp Met Arg Asp Asn Trp Arg
865                 870                 875                 880
```

```
Ser Glu Leu Tyr Lys Tyr Lys Val Val Glu Ile Lys Pro Leu Gly Ile
                885                 890                 895

Ala Pro Asp Lys Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala
            900                 905                 910

Val Gly Ile Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser
        915                 920                 925

Thr Met Gly Ala Ala Ser Met Thr Leu Thr Val Gln Ala Arg Gln Leu
    930                 935                 940

Leu Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
945                 950                 955                 960

Ala Gln Gln His Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln Leu
                965                 970                 975

Gln Thr Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln Gln Leu
            980                 985                 990

Leu Gly Ile Trp Gly Cys Ser Gly  Lys Leu Ile Cys Thr  Thr Ala Val
        995                 1000                1005

Pro Trp  Asn Ala Ser Trp Ser  Asn Lys Ser Tyr Glu  Glu Ile Trp
    1010                1015                1020

Gly Asn  Met Thr Trp Met Gln  Trp Asp Arg Glu Ile  Asn Asn Tyr
    1025                1030                1035

Thr Asn  Thr Ile Tyr Ser Leu  Leu Glu Glu Ser Gln  Asn Gln Gln
    1040                1045                1050

Glu Lys  Asn Glu Lys Asp Leu  Leu Ala Leu Asp Ser  Trp Glu Ser
    1055                1060                1065

Leu Trp  Ser Trp Phe Asn Ile  Thr Asn Trp Leu Trp  Tyr Ile Arg
    1070                1075                1080
```

```
Ile Phe  Ile Ile Ile Val Gly  Gly Leu Ile Gly Leu  Arg Ile Ile
    1085                1090                1095

Phe Ala  Val Leu Ser Ile Val  Asn Arg Val Arg Gln  Gly Tyr Ser
    1100                1105                1110

Pro Leu  Ser Phe Gln Thr Leu  Thr Pro Ser Pro Arg  Glu Pro Asp
    1115                1120                1125

Arg Leu  Gly Arg Ile Glu Glu  Glu Gly Gly Glu Gln  Asp Arg Ala
    1130                1135                1140

Arg Ser  Val Arg Leu Val Asn  Gly Phe Leu Ala Leu  Ala Trp Glu
    1145                1150                1155

Asp Leu  Arg Ser Leu Cys Leu  Phe Ser Tyr His Arg  Leu Arg Asp
    1160                1165                1170

Leu Ile  Leu Ile Ala Ala Arg  Ala Ala Ala Leu Leu  Gly Arg Ser
    1175                1180                1185

Ser Leu  Trp Gly Leu Gln Lys  Gly Trp Glu Ala Leu  Lys Tyr Leu
    1190                1195                1200

Gly Ser  Leu Val Gln Tyr Trp  Gly Leu Glu Leu Lys  Lys Ser Ala
    1205                1210                1215

Ile Ser  Leu Phe Asp Ala Ile  Ala Ile Thr Val Ala  Glu Gly Thr
    1220                1225                1230

Asp Arg  Ile Ile Asn Ile Val  Gln Arg Ile Ser Arg  Ala Phe Tyr
    1235                1240                1245

Asn Ile  Pro Arg Arg Ile Arg  Gln Gly Phe Glu Ala  Thr Leu Gln
    1250                1255                1260

Gly Thr  Ser Arg Val Asp Pro  Gly Gly Gln Thr Ala  Asp Gln Pro
    1265                1270                1275
```

```
Arg Leu  Cys Leu Leu Val Ala  Ser His Leu Leu Phe  Ala Pro Pro
    1280                1285                1290

Pro Cys  Leu Pro Pro Trp Lys  Val Pro Leu Pro Leu  Ser Phe Pro
    1295                1300                1305

Asn Lys  Met Arg Lys Leu His  Arg Ile Val Val Gly  Val Ile Leu
    1310                1315                1320

Phe Trp  Gly Val Gly Trp Gly  Arg Thr Ala Arg Gly  Arg Ile Gly
    1325                1330                1335

Lys Thr  Ile Ala Gly Met Leu  Gly Met Arg Trp Ala  Leu Trp Leu
    1340                1345                1350

Leu Arg  Arg Lys Glu Pro Ala  Asp Leu Gln Ile Ile  His Leu Cys
    1355                1360                1365

Arg Val  Arg Arg Lys Arg Asn  Gly Ile Met Gly Ile  Met Gly Leu
    1370                1375                1380

His Ile  Gly Gln Ile Ser Thr  Tyr Ala Gly His Arg  Ala Cys Gly
    1385                1390                1395

Leu Ala  Pro Pro Gln Asp Met  Ala Arg Val Arg Ala  Gln Arg His
    1400                1405                1410

Asp Pro  Leu Gln Cys Ala Pro  Gly Leu Pro Pro Arg  His Val His
    1415                1420                1425

Ala Leu  Pro Val Gln His Ala  Ile Cys Glu Gly Ala  Ala Gly Ala
    1430                1435                1440

Arg Cys  His Val Gln Ser Glu  Pro Asp Gly Gly Val  His Glu Cys
    1445                1450                1455

Gly Ala  Val Glu Asn Ser Glu  Ile Ile Gln Asp Gln  Val Pro Gly
    1460                1465                1470
```

```
Leu Arg  Met Arg Arg Gln Ala  Arg Gln Ala Ser Ala  Arg Val Cys
    1475                1480                1485

Gly Gly  Asp Gly Gly Pro Ala  Thr Arg Ser Phe Gly  Val Val Leu
    1490                1495                1500

Gln Arg  Asp Gly Val Arg Leu  Gln Arg Gly Arg Ile  Leu Glu Val
    1505                1510                1515

Val Phe  Gly Ala Gly Cys Glu  Pro Ala Gly Ala Glu  Leu Lys Ser
    1520                1525                1530

Val Val  Phe Cys Val Leu Gln  Gln His Glu Arg Lys  Arg Leu Leu
    1535                1540                1545

Gly Arg  Gly Ile Gln Pro Leu  Ser Asp Gly Ala Ser  Pro Leu Leu
    1550                1555                1560

Gly Gly  Ser Ala Ser Glu Cys  Asp Gly Ile His Gly  Gly Arg Pro
    1565                1570                1575

Ala Arg  Ala Ala Arg Glu Leu  Phe Asn Pro Asp Leu  Arg Asp Pro
    1580                1585                1590

Glu Leu  Leu Val Arg Gly Arg  Ser Cys Arg Arg Ser  Cys Cys Phe
    1595                1600                1605

Arg Arg  Gln Arg Arg Ala Arg  Asn Gly Pro Gly Arg  Arg Leu Leu
    1610                1615                1620

Gln Leu  Ser Gly Gly Gln Leu  Glu Phe His Gln Ser  Arg Gln Pro
    1625                1630                1635

Glu Arg  Gly Glu Ala Ala Ala  Ala Asp Gly Pro Ala  Arg Gly Pro
    1640                1645                1650

Asp Pro  Ala Pro Gly Arg Ala  Asp Pro Ala Gly Gly  Ser Ala Ala
    1655                1660                1665
```

```
Gly Gly  Asp Ala Gly Arg Gly  Cys His Gly Glu Asn  Gln Ile Lys
    1670                1675                1680

Asn Glu  Ser Ile Asn Lys Arg  Arg Arg Leu Leu Ile  Leu Thr Gln
    1685                1690                1695

Ser Leu  Glu Ser Leu Phe Asp  Phe Ser Arg Ala Val  Gly Pro Gly
    1700                1705                1710

Pro Pro  Val Ser Ile Ile Glu  His Pro Val Asp Leu  Phe Gln Asp
    1715                1720                1725

Pro Val  Glu Val Gly Leu Asp  Val Glu Val His Gly  His Glu Pro
    1730                1735                1740

Val Pro  Gly Val Glu Val Ala  Pro Leu Gln Gly Leu  Val Leu Gly
    1745                1750                1755

Asp Gly  Val Val Asn His Pro  Val Ile Ala Gly Ala  Gln Gly Val
    1760                1765                1770

Val Leu  His Asp Val Leu Glu  Glu Glu Thr Asp Gly  His Gly Gln
    1775                1780                1785

Pro Leu  Gly Val Gly Val Asp  Glu Pro Val Glu Leu  Gly Gly Met
    1790                1795                1800

His Ala  Gly Gly Asp Glu Met  His Leu Gly Leu Asp  Leu Glu Ile
    1805                1810                1815

Gly Asp  Val Pro Ala Gln Ile  Pro Pro Gly Val His  Val Val Gln
    1820                1825                1830

Asp His  Gln His Gly Val Ser  Gly Ala Leu Gly Glu  Phe Val Met
    1835                1840                1845

Gln Leu  Gly Arg Glu Gly Val  Lys Glu Phe Gly Asp  Ala Leu Val
    1850                1855                1860
```

```
Thr Ala  Gln Val Phe His Ala  Leu Ile His Asp Asp  Gly Asp Gly
    1865                1870                1875

Pro Val  Gly Gly Gly Leu Gly  Lys Asp Val Ser Gly  Val Gly His
    1880                1885                1890

Ile Val  Val Val Val Leu Gly  Glu Leu Val Ile Gly  His Phe Asn
    1895                1900                1905

Glu Phe  Gly Ala Glu Gly Ala  Arg Leu Gly Asp Glu  Gly Ala Leu
    1910                1915                1920

Asp Pro  Gly Gly Val Val Ala  Leu Ala Asp Leu His  Leu Pro Gly
    1925                1930                1935

Leu Glu  Leu Gly Gly Gly Asp  His Val His Leu Arg  Gly Asp Glu
    1940                1945                1950

Lys Asn  Gly Phe Arg Gly Gly  Gly Asp Glu Leu Gly  Arg Lys Gln
    1955                1960                1965

Val Pro  Glu Gln Leu Gly Leu  Ala Ala Thr Gly Gly  Ala Val Asp
    1970                1975                1980

Asp Pro  Asp Asp Arg Leu Gln  Val Val Val Glu Gly  Glu Thr Ala
    1985                1990                1995

Ala Val  Leu Ala Glu Glu Gly  Gly His Leu Val His  His Leu Ala
    2000                2005                2010

His Met  His Val Leu Ala His  Glu Phe Arg Gln Glu  Ala Leu Ala
    2015                2020                2025

Pro Gln  Arg Glu Glu Leu Leu  Gln Arg Gly Glu Val  Phe Gln Arg
    2030                2035                2040

Leu Glu  Ser Val Gly His Gly  His Phe Gly Glu Gly  Leu Leu Gln
    2045                2050                2055
```

```
Glu Phe  Gln Thr Val Pro Glu  Leu Gly Asp Val Leu  Gly Ile Ser
    2060                2065                2070

Ile Gln  Gln Thr Ser Ser Phe  Arg Gly Leu Gly Arg  Leu Arg Glu
    2075                2080                2085

Gly Thr  Arg Arg Trp Ala Ser  Ser Glu Ala Arg Val  Arg Ser Phe
    2090                2095                2100

Gln Gly  Arg Arg Val Arg Val  Ser Val Val Ser Val  Thr Val Lys
    2105                2110                2115

Gly Cys  Ala Pro Gly Trp Ala  Leu Ala Arg Val Arg  Phe Arg Leu
    2120                2125                2130

Ile Arg  Leu Val Glu Asn Arg  Ser Arg Ser Ala Pro  Cys Ala Ser
    2135                2140                2145

Ala Arg  Gln Leu Ser Met Ser  Ser Leu Ser Ala Ser  Ala Ala Trp
    2150                2155                2160

Pro Leu  Ala Arg Ser Leu Pro  Leu Glu Val Cys Pro  Gln Thr Gly
    2165                2170                2175

Gln Arg  Arg Asp Leu Arg Ala  Ser Leu Gly Ala Arg  Lys Thr Asp
    2180                2185                2190

Ser Gly  Ala Ala Ser Ala Pro  Gln Leu Ala Gln Thr  Val Ser His
    2195                2200                2205

Ser Thr  Ser Gln Val Arg Ser  Gly Arg Leu Gly Ser  Lys Thr Arg
    2210                2215                2220

Phe Pro  Pro Cys Phe Leu Met  Arg Phe Leu Pro Leu  Val Ser Met
    2225                2230                2235

Ser Ser  Cys Pro Arg Trp Val  Thr Lys Arg Leu Ser  Val Ser Pro
    2240                2245                2250
```

```
Thr Asp  Phe Met Gly Arg Ser  Ser Ser Gly Val Pro  Arg Ser Ser
    2255                 2260                 2265

Ser Arg  Asn Pro Ala His Ser  Glu Thr Lys Ala Arg  Val Gln Ala
    2270                 2275                 2280

Ser Thr  Lys Glu Ala Thr Trp  Glu Gly Arg Ser Leu  Ser Thr Ser
    2285                 2290                 2295

Gly Ser  Thr Phe Ser Arg Val  Cys Lys His Met Ser  Pro Ser Ser
    2300                 2305                 2310

Thr Ser  Arg Lys Val Ile Gly  Leu Val Ala Thr Pro  Gly Val Pro
    2315                 2320                 2325

Ala Gly  Gly Val Lys Gly Ala  Gly Pro Cys Ser Ser  Ser Leu Ser
    2330                 2335                 2340

Ser Gly  Ser Leu Ser Arg Ser  Ala Ser Cys Trp Gly  Arg Tyr Ser
    2345                 2350                 2355

Leu Ser  Lys Ala Gly Met Thr  Ser Ala Leu Arg Leu  Ser Val Ser
    2360                 2365                 2370

Arg Asn  Glu Glu Asp Leu Ile  Leu Thr Val Pro Leu  Glu Thr Pro
    2375                 2380                 2385

Phe Met  Ser Pro Ser Ser Ile  Trp Ser Glu Lys Thr  Ile Phe Leu
    2390                 2395                 2400

Leu Ser  Ser Leu Val Ala Lys  Glu Pro Arg Ala Leu  Glu Ser Ser
    2405                 2410                 2415

Leu Ala  Met Glu Arg Met Val  Trp Phe Phe Ser Leu  Ser Ala Arg
    2420                 2425                 2430

Ser Leu  Ala Ala Met Leu Ser  Cys Thr Tyr Ser Arg  Ala Thr His
    2435                 2440                 2445
```

```
Phe His  Ser Gly Lys Thr Val  Val Ser Ser Ser Gly  Thr Ile Leu
    2450                2455                2460

Thr Arg  Gln Pro Arg Leu Cys  Arg Val Met Arg Ser  Thr Leu Val
    2465                2470                2475

Ala Thr  Ser Pro Arg Arg Gly  Ser Leu Val Gln Gln  Arg Arg Pro
    2480                2485                2490

Pro Leu  Arg Glu Gln Lys Gly  Gly Ser Gly Ser Ser  Met Ser Ser
    2495                2500                2505

Ser Gly  Gly Ser Ala Ser Thr  Val Lys Met Pro Gly  Arg Ser Ser
    2510                2515                2520

Gly Ser  Lys Leu Met Gln Val  Pro Arg Leu Ser Ser  Ala Ala Cys
    2525                2530                2535

Gln Ser  Arg Thr Ala Ser Ala  Arg Ser Gly Leu Arg  Gly Val Pro
    2540                2545                2550

Gln Gly  Met Gly Cys Val Ser  Ala Glu Ala Tyr Met  Pro Gln Met
    2555                2560                2565

Ser Thr  Arg Gly Ser Ser Arg  Thr Pro Met Val Gly  Gln Arg Pro
    2570                2575                2580

Pro Arg  Met Leu Ala Arg Thr  Ser Tyr Ser Ser Cys  Glu Gly Ala
    2585                2590                2595

Arg Ser  Pro Val Pro Arg Leu  Glu Arg Cys Gly Phe  Ser Ala Arg
    2600                2605                2610

Thr Ile  Trp Arg Lys Met Ala  Trp Glu Leu Glu Glu  Met Val Gly
    2615                2620                2625

Leu Trp  Lys Met Leu Lys Trp  Ala Trp Gly Arg Pro  Thr Glu Ser
    2630                2635                2640
```

```
Leu Met  Lys Trp Ala Glu Ser  Cys Ser Leu Ala Thr  Ser Ser Ala
    2645                 2650                 2655

Val Thr  Arg Thr Ser Arg Ala  Gln Ser Arg Val Ser  Trp Met Met
    2660                 2665                 2670

Ser Tyr  Leu Ser Trp Pro Phe  Cys Phe His Ser Ser  Arg Leu Arg
    2675                 2680                 2685

Arg Asn  Ser Ser Arg Ser Phe  Gln Tyr Ser Ser Arg  Gly Asn Pro
    2690                 2695                 2700

Ser Ser  Ala Arg Glu Pro Thr  Met Asn Trp Leu Thr  Ala Leu Ala
    2705                 2710                 2715

Gln Gln  Pro Phe Ser Thr Gly  Arg Ala Ala Cys Ala  Ala Leu Arg
    2720                 2725                 2730

Arg Glu  Val Trp Val Arg Ala  Lys Val Ser Arg Thr  Met Thr Leu
    2735                 2740                 2745

Arg Asn  Trp Cys Leu Lys Ser  Arg Ser Ser Gln Pro  Pro Cys Ser
    2750                 2755                 2760

Gln Ser  Trp Lys Ser Val Arg  Phe Leu Ala Gly Leu  Gly Lys Ala
    2765                 2770                 2775

Lys Val  Thr Ser Leu Lys Arg  Ile Leu Pro Ala Arg  Gly Met Lys
    2780                 2785                 2790

Leu Arg  Val Met Arg Lys Gly  Trp Gly Thr Ser Ala  Arg Leu Leu
    2795                 2800                 2805

Met Thr  Trp Ala Ala Arg Thr  Ile Ser Ser Lys Pro  Leu Met Leu
    2810                 2815                 2820

Cys Pro  Thr Met Ser Ser Thr  Asn Arg Gly Arg Pro  Leu Thr Trp
    2825                 2830                 2835
```

```
Gly Ser  Phe Leu Ser Ser Ser  Val Ser Ser Ala Gly  Ser Leu Ser
    2840                2845                2850

Pro Cys  Cys Ser Arg Ala Gln  Ser Ala Thr Trp Gly  Leu Ala Leu
    2855                2860                2865

Arg Lys  Glu Val Gln Arg Ser  Thr Ala Arg Ala Val  Cys Lys Arg
    2870                2875                2880

Ser Arg  Tyr Arg Asn Cys Trp  Pro Thr Ala Ile Phe  Ser Gly Val
    2885                2890                2895

Thr Gln  Lys Val Arg Gly Ser  Pro Cys Gln Arg Ser  His Leu Ser
    2900                2905                2910

Trp Arg  Ala Arg Ser Trp Ala  Ser Ser Thr Ser Gly  Gly Ser Pro
    2915                2920                2925

Glu Ser  Phe Met Thr Ser Met  Lys Gly Thr Ser Cys  Leu Pro Lys
    2930                2935                2940

Asp Pro  Ile Gln Val Val Ser  Thr Ser Val Arg Lys  Ser Leu Ser
    2945                2950                2955

Val Arg  Gly Cys Glu Pro Met  Gly Lys Asn Trp Ile  Ser Cys His
    2960                2965                2970

Gln Leu  Glu Glu Trp Leu Leu  Met Trp Lys Lys Cys  Arg Arg Arg
    2975                2980                2985

Ala Glu  His Ser Cys Leu Cys  Leu Tyr Lys Arg Pro  Gln Cys Ser
    2990                2995                3000

Gln Arg  Cys Thr Gly Cys Thr  Cys Cys Thr Ser Cys  Thr Trp Val
    3005                3010                3015

Pro Leu  Ala Arg Asn Phe Ser  Gly Gln Trp Ser Ala  Gly Gly Cys
    3020                3025                3030
```

```
Ile Ser  Cys Cys Thr Thr Ser  Trp Pro Ser Ala Trp  Pro Ser Ser
    3035                3040                3045

Ala Ser  Met Val Val Met Leu  Thr Ser Pro Arg Gly  Arg Gln Val
    3050                3055                3060

Gln Thr  Ser Ala Arg Thr Gly  Arg Arg Ala Arg Thr  Arg Ala Arg
    3065                3070                3075

Arg Pro  Glu Leu Ser Arg Val  Leu Arg Arg Cys Gly  Val Arg Ser
    3080                3085                3090

Val Gly  Ser Gly Gly Ala Arg  Leu Thr Cys Arg Ser  Phe Ser Arg
    3095                3100                3105

Ala Arg  Gly Arg Ser Arg Trp  Tyr Leu Ile Ser Thr  Ala Pro Leu
    3110                3115                3120

Val Ala  Thr Ser Thr Ala Cys  Arg Val Pro Cys Pro  Trp Gly Ala
    3125                3130                3135

Thr Thr  Val Pro Arg Phe Phe  Leu Gly Ala Ala Ser  Met Ser Val
    3140                3145                3150

Arg Ser  Gly Gly Glu Asp Ala  Arg Arg Ala Ala Gly  Ala Ala Arg
    3155                3160                3165

Gly Pro  Glu Ala Gly Ala Ala  Gly Ala Arg Arg Arg  Arg Ala Arg
    3170                3175                3180

Ala Gly  Ser Gly Thr Ala Pro  Gly Glu Asp Trp Arg  Glu Arg Arg
    3185                3190                3195

Arg Asp  Gly Arg Pro Gly Ser  Asp Ala Ser Gly Arg  Pro Arg Asp
    3200                3205                3210

Pro Val  Thr Lys Arg Val Arg  Gln Asn Gln Ser Arg  Tyr Arg Arg
    3215                3220                3225
```

```
Arg Pro  Ala Ala Gly Ser Leu  Ala Arg Arg Pro Ser  Cys Pro Gly
    3230                3235                3240

Arg Arg  Ser Arg Ser Thr Ala  Arg Ser Pro Pro Pro  Glu Gly Leu
    3245                3250                3255

Arg Gly  Arg Arg Ala Arg Arg  Trp Pro Arg Gly Arg  Trp Arg Cys
    3260                3265                3270

Gly Pro  Ala Ala Arg Arg Arg  Ser Cys Arg Pro Arg  Ser Arg Arg
    3275                3280                3285

Gly Cys  Arg Pro Arg Leu Arg  Arg Gly Arg Ala Arg  Ala Pro Pro
    3290                3295                3300

Gly Arg  Gly Ala Arg Arg Gly  Ala Arg Pro Arg Ser  Cys Arg Gly
    3305                3310                3315

Ala Gly  Arg Gly Ser Ala Trp  Trp Arg Cys Ala Arg  Arg Arg Ser
    3320                3325                3330

Thr Ser  Ser Gly Gly Ala Ala  Ser Arg Arg Arg Pro  Gly Leu Pro
    3335                3340                3345

Ser Val  Pro Trp Pro Arg Arg  Ser Pro Arg Arg Ser  Lys Thr Gly
    3350                3355                3360

Ser Cys  Ala Pro Arg Arg Ser  Thr Pro Pro Pro Glu  Asp Gly Ala
    3365                3370                3375

Arg Arg  Trp Trp Arg Ala Pro  Arg Ala Arg Arg Pro  Arg Gly Ala
    3380                3385                3390

Pro Leu  Pro Ser Pro Pro Leu  Pro Pro Pro Leu Thr  Ser Leu Leu
    3395                3400                3405

Leu Pro  Pro Gln Glu Ala Val  Ala Gly Glu Gly Pro  Cys Val Ala
    3410                3415                3420
```

```
Gly Gly  Ala Arg Ala Asp Gly  Arg Ser Ala Arg Trp  Ser Pro Arg
    3425                3430                3435

Ala Gly  Asp Ala Trp Ser Arg  Arg Arg Ala Arg Pro  Arg Gly Ala
    3440                3445                3450

Ala Ala  Arg Arg Arg Arg Ala  Ser Pro Gly Gly Arg  Arg Gly Gly
    3455                3460                3465

Leu Arg  Trp Ala Gly Arg Gly  Arg Arg Cys Ile Leu  Ser Ile Asp
    3470                3475                3480

Pro Gly  Leu Arg Ala Arg Thr  Ala Ser Arg Asp Pro  Arg Asp Pro
    3485                3490                3495

Lys Thr  Ala Glu Arg Arg Leu  Arg Ala Ser Arg Ser  Arg Lys Val
    3500                3505                3510

Gly Ala  Arg Phe Leu Val Leu  Arg Val Phe Gly Arg  Glu Ala Gly
    3515                3520                3525

Gly Arg  Cys Cys Trp Ser Ser  Arg Arg Ser Asp Gly  Gly Trp Trp
    3530                3535                3540

Arg Gly  Ala Pro Gly Pro Trp  Ala Arg Leu Ala Gly  Cys Ala Asp
    3545                3550                3555

Gly Arg  Pro Cys Pro Arg Arg  Gly Pro Asp Thr Trp  Arg Gly Pro
    3560                3565                3570

Cys Ser  Ser Pro Ala Ala Ala  Pro Arg Ala Pro Pro  Pro Arg Pro
    3575                3580                3585

Arg Gly  Arg Ala Cys Ala Ala  Arg Thr Arg Ala Ala  Ala Gly Arg
    3590                3595                3600

Ala Pro  Gly Arg Arg Arg Arg  Ala Arg Gly Trp Pro  Ala Gly Ser
    3605                3610                3615
```

```
Gly Gly  Trp Ser Gly Ser Arg  Arg Ser Arg Arg Ser  Gly Gly Arg
    3620                 3625                 3630

Leu Arg  Cys Trp Cys Arg Ser  Ser Trp Pro Arg Thr  Ser Arg Ser
    3635                 3640                 3645

Gly Gly  Arg Val Ala Arg Ala  Arg Gly Thr Gly Ala  Ser Arg Arg
    3650                 3655                 3660

Ala Cys  Arg Arg Cys Ser Arg  Cys Arg Arg Ala Arg  Gly Thr Gly
    3665                 3670                 3675

Ile Arg  Arg Gly Ser Ala Ala  Ala Ala Gly Gly Arg  Ala Ala Ile
    3680                 3685                 3690

Ala Arg  Trp Arg Gly Arg Arg  Ala Arg Gly Pro Arg  Ala Gly Gly
    3695                 3700                 3705

Gly Ser  Arg Arg Cys Thr Trp  Thr Ser Arg Cys Arg  Arg Arg Trp
    3710                 3715                 3720

Trp Arg  Arg Ala Gly Thr Arg  Gly Arg Gly Ser Arg  Cys Cys Ala
    3725                 3730                 3735

Ala Ala  Gly Ser Ser Ser Trp  Trp Pro Arg Ser Gly  Pro Gly Ala
    3740                 3745                 3750

Arg Ser  Arg Gly Cys Ser Arg  His Thr Gly Lys Asn  Glu Ser Gly
    3755                 3760                 3765

Gln Arg  Leu Asp Ser Val Ala  Trp Arg Leu Ser Glu  Arg Val Gly
    3770                 3775                 3780

Leu Arg  Val Tyr Pro Gly Ser  Asn Leu Glu Ser Gly  Trp Ser Arg
    3785                 3790                 3795

Ser Arg  Gly Thr Gly Thr Pro  Val Ser Thr Gln Ala  Cys Arg Asn
    3800                 3805                 3810
```

```
Leu Gln  Asp Thr Glu Ala Gly  Arg Phe Leu Ala Leu  Val Ala Gly
    3815                 3820                 3825

His Glu  Lys Leu Val Ser Ala  Glu Ser Gly Arg Pro  Arg Trp Leu
    3830                 3835                 3840

Ala Ala  Val Val Trp Arg Lys  Asn Arg Gln Gly Cys  Val Ala Val
    3845                 3850                 3855

Cys Pro  Gly Ser Ser Leu Ser  Ala Arg Arg Arg Pro  Asp Ser Ala
    3860                 3865                 3870

Ala Asn  Val Gly Val Ala Ala  Pro Ser Phe Pro Arg  Pro Leu Ser
    3875                 3880                 3885

Gln Pro  Thr Ser Pro Val Thr  Glu Arg Ala Pro Leu  Phe Phe Ser
    3890                 3895                 3900

Cys Val  Phe Ala Arg Cys Ile  Pro Tyr Cys Gly Arg  Cys Ala Pro
    3905                 3910                 3915

Thr Leu  His His Asn Arg Pro  Tyr Arg Ser Ser Ser  Asn Ser Arg
    3920                 3925                 3930

Arg Phe  Cys Pro Arg Pro Ser  Ser Ser Gln Pro Leu  Pro Arg Arg
    3935                 3940                 3945

Pro Pro  Ala Glu Pro Ala Phe  Ser Met Thr Trp Pro  Trp Lys Arg
    3950                 3955                 3960

Ala Arg  Gly Trp Arg Gly Trp  Gly Arg Arg Arg Arg  Ser Gly Thr
    3965                 3970                 3975

Arg Ala  Cys Arg Lys Gly Thr  Leu Ala Arg Pro Thr  Cys Pro Ser
    3980                 3985                 3990

Arg Thr  Cys Ser Glu Thr Gly  Ala Ala Arg Ser Pro  Arg Arg Cys
    3995                 4000                 4005
```

```
Ala Pro  Pro Ala Ser Thr Arg  Gly Gly Ser Cys Gly  Ala Ala Trp
    4010                4015                4020

Thr Glu  Ser Gly Cys Gly Thr  Arg Ile Ser Arg Arg  Thr Ser Arg
    4025                4030                4035

Gly Ser  Ala Pro Arg Ala Arg  Thr Trp Pro Arg Pro  Thr Trp Ser
    4040                4045                4050

Arg Arg  Thr Ser Arg Pro Arg  Arg Arg Ala Thr Ser  Lys Asn Pro
    4055                4060                4065

Ser Thr  Thr Thr Cys Ala Arg  Ser Arg Ala Arg Arg  Pro Trp Ala
    4070                4075                4080

Cys Thr  Cys Gly Thr Cys Trp  Arg Pro Ser Cys Arg  Thr Pro Arg
    4085                4090                4095

Ala Ser  Arg Arg Arg Ser Cys  Phe Trp Trp Cys Ser  Thr Val Gly
    4100                4105                4110

Thr Thr  Arg Arg Ser Gly Arg  Arg Cys Ile Ser Pro  Ser Pro Arg
    4115                4120                4125

Ala Ala  Gly Ser Trp Thr Trp  Thr Phe Cys Arg Ala  Ser Trp Cys
    4130                4135                4140

Arg Ser  Ala Gly Cys Arg Cys  Pro Arg Ser Trp Arg  Pro Ser Thr
    4145                4150                4155

Ser Arg  Cys Val Trp Ala Ser  Thr Thr Leu Gly Arg  Ser Thr Arg
    4160                4165                4170

Pro Arg  Thr Cys Pro Thr Arg  Arg Arg Ser Thr Gly  Phe Thr Cys
    4175                4180                4185

Ala Pro  Lys Cys Pro Ala Thr  Ile Trp Gly Cys Thr  Ala Thr Thr
    4190                4195                4200
```

```
Gly Cys  Thr Ala Arg Ala Pro  Ala Ala Gly Ala Ser  Ala Thr Arg
    4205                4210                4215

Ser Cys  Thr Ala Cys Ser Gly  Pro Pro Gly Pro Gly  Pro Arg Gly
    4220                4225                4230

Arg Ala  Thr Leu Thr Trp Ala  Arg Thr Cys Ala Gly  Ser Pro Ala
    4235                4240                4245

Ala Gly  Pro Trp Lys Leu Pro  Ala Val Pro Pro Thr  Trp Arg Arg
    4250                4255                4260

Trp Thr  Met Arg Arg Arg Arg  Ala Ser Thr Trp Lys  Thr Asp Gly
    4265                4270                4275

Ala Thr  Val Phe Leu Leu Asp  Ala Ala Thr Ala Thr  Ala Ala Ala
    4280                4285                4290

Ser Ser  Arg Asp Ala Gly Gly  Ala Ala Glu Pro Ala  Val Arg His
    4295                4300                4305

Leu Leu  Gly Arg Leu Asp Pro  Gly His Ala Thr His  His Gly Ala
    4310                4315                4320

Asp Asp  Pro Gln Ser Arg Ser  Leu Thr Ala Ala Ser  Gly Gln Pro
    4325                4330                4335

Ala Leu  Gly His Pro Gly Gly  Arg Gly Ala Leu Ala  Leu Glu Pro
    4340                4345                4350

His Ala  Arg Glu Gly Ala Gly  His Arg Glu Arg Ala  Gly Gly Glu
    4355                4360                4365

Gln Gly  His Pro Arg Arg Gly  Arg Ala Gly Val Gln  Arg Ala Ala
    4370                4375                4380

Gly Ala  Arg Gly Pro Leu Gln  Gln His Gln Arg Ala  Asp Glu Pro
    4385                4390                4395
```

```
Gly Pro  His Gly Asp Arg Arg  Ala Arg Gly Gly Val  Ala Ala Arg
    4400                4405                4410

Ala Val  Pro Pro Arg Val Glu  Pro Gly Leu His Gly  Gly Ala Glu
    4415                4420                4425

Arg Leu  Pro Glu His Ala Ala  Arg Gln Arg Ala Pro  Gly Pro Gly
    4430                4435                4440

Gly Leu  His Gln Leu His Gln  Arg Ala Ala Ala Asp  Gly Gly Arg
    4445                4450                4455

Gly Ala  Pro Glu Arg Gly Val  Pro Val Gly Ala Gly  Leu Leu Leu
    4460                4465                4470

Pro Asp  Gln Ser Pro Gly Leu  Ala Asp Arg Glu Pro  Glu Pro Gly
    4475                4480                4485

Phe Gln  Glu Leu Ala Gly Thr  Val Gly Arg Ala Gly  Pro Gly Arg
    4490                4495                4500

Gly Pro  Arg Asp Gly Val Glu  Pro Ala Asp Ala Glu  Leu Ala Pro
    4505                4510                4515

Ala Ala  Ala Ala Gly Gly Ala  Leu His Gly Gln Arg  Gln Arg Glu
    4520                4525                4530

Pro Arg  Leu Val Pro Gly Leu  Pro Ala Pro Val Pro  Arg Gly His
    4535                4540                4545

Arg Thr  Gly Ala Arg Gly Arg  Ala Asp Leu Pro Gly  Asp His Pro
    4550                4555                4560

Arg Glu  Pro Arg Ala Gly Pro  Gly Gly Pro Gly Gln  Pro Gly Gly
    4565                4570                4575

His Pro  Glu Leu Pro Ala Asp  Gln Pro Val Ala Glu  Asp Pro Ala
    4580                4585                4590
```

```
Pro Val  Arg Ala Glu His Arg  Gly Gly Ala His Pro  Ala Leu Arg
    4595                4600                4605

Ala Ala  Glu Arg Gly Ala Val  Pro Asp Ala Gly Gly  Gly His Ala
    4610                4615                4620

Gln Arg  Gly Ala Arg His Asp  Arg Ala Gln His Gly  Ala Gln His
    4625                4630                4635

Val Arg  Pro Gln Pro Pro Val  His Gln Ala Asp Gly  Leu Leu Ala
    4640                4645                4650

Ser Gly  Gly Arg His Glu Leu  Gly Leu Leu Tyr Gln  Arg His Leu
    4655                4660                4665

Glu Pro  Ala Leu Ala Pro Ala  Ala Arg Val Leu His  Gly Arg Val
    4670                4675                4680

Arg His  Ala Arg Pro Gln Arg  Arg Val Pro Val Gly  Arg Arg Gly
    4685                4690                4695

Gln Gln  Arg Val Leu Ala Ala  Ser Arg Asn Gln Cys  Arg Val Glu
    4700                4705                4710

Glu Arg  Gly Arg Gly Pro Ala  Ala Val Leu Gly Ala  Val Arg Ser
    4715                4720                4725

Arg Gly  Cys Cys Arg Gly Gly  Ala Arg Gly Arg Gln  Pro Leu Pro
    4730                4735                4740

Glu Pro  Ala Leu Phe Ala Glu  Gln Arg Ala Gln Gln  Arg Ala Gly
    4745                4750                4755

Ser Ala  Asp Ala Thr Ala Pro  Ala Gly Arg Gly Gly  Val Pro Glu
    4760                4765                4770

Arg Leu  Leu Val Glu Ala Arg  Ala Arg Glu Glu Leu  Pro Gln Arg
    4775                4780                4785
```

```
Asp Arg  Glu Pro Gly Gly Gln  Asp Glu Pro Leu Glu  Asp Val Arg
    4790                 4795                 4800

Ala Arg  Ala Gln Gly Arg Ala  Pro Ser Gln Arg Arg  His Pro Thr
    4805                 4810                 4815

Pro Ala  Ala Arg Gln Ala Ala  Gly Thr Gly Val Gly  Arg Gly Phe
    4820                 4825                 4830

Arg Arg  Arg Gln Gln Arg Val  Gly Leu Gly Trp Glu  Trp Trp Pro
    4835                 4840                 4845

Val Arg  Ser Pro Ala Pro Pro  Tyr Arg Ala Pro Asp  Val Arg Ile
    4850                 4855                 4860

Lys Asn  Lys Arg Arg Tyr Ser  Pro Arg Pro Trp Arg  Pro Ala Cys
    4865                 4870                 4875

Val Leu  Leu Cys Cys Leu Tyr  Asp Glu Ala Arg Val  Pro Gly Gly
    4880                 4885                 4890

Ser Ser  Ser Leu Val Arg Glu  Arg Asp Ala Ala Gly  Gly Gly Gly
    4895                 4900                 4905

Gly Asp  Ala Ala Pro Ala Gly  Gly Ala Leu Arg Ala  Pro Ala Val
    4910                 4915                 4920

Pro Gly  Ala Tyr Gly Gly Ala  Glu Gln His Ser Leu  Leu Gly Ala
    4925                 4930                 4935

Gly Thr  Leu Val Arg Tyr His  Pro Val Val Pro Gly  Gly Gln Gln
    4940                 4945                 4950

Val Gly  Arg His Arg Leu Ala  Glu Leu Pro Glu Arg  Pro Gln Gln
    4955                 4960                 4965

Leu Pro  Asp His Arg Gly Ala  Glu Gln Arg Phe His  Pro His Gly
    4970                 4975                 4980
```

```
Gly Gln  His Pro Asp His Gln  Leu Arg Ala Leu Ala  Val Gly Arg
    4985                4990                4995

Pro Ala  Glu Asn His His Ala  His Gln His Ala Gln  Arg Glu Arg
    5000                5005                5010

Val His  Val Gln Gln Gln Val  Gln Gly Ala Gly Asp  Gly Leu Ala
    5015                5020                5025

Gln Asp  Pro Gln Arg Gly Gly  Leu Trp Ser Gly Arg  Ala Asp Leu
    5030                5035                5040

Arg Val  Gly Gly Val Ala Ala  Arg Gly Gln Leu Leu  Gly Asp His
    5045                5050                5055

Asp His  Arg Ser Asp Glu Gln  Arg His His Arg Gln  Leu Leu Gly
    5060                5065                5070

Gly Gly  Ala Ala Glu Arg Gly  Ala Gly Glu Arg His  Arg Arg Glu
    5075                5080                5085

Val Arg  His Ala Gln Leu Pro  Ala Gly Leu Gly Pro  Arg Asp Arg
    5090                5095                5100

Ala Gly  Asp Ala Gly Arg Val  His Gln Arg Gly Leu  Pro Pro Arg
    5105                5110                5115

His Arg  Pro Ala Ala Arg Leu  Arg Arg Gly Leu His  Arg Glu Pro
    5120                5125                5130

Pro Gln  Gln Pro Ala Gly His  Pro Gln Ala Ala Ala  Leu Pro Gly
    5135                5140                5145

Gly Leu  Pro Asp Pro Val Arg  Gly Pro Gly Gly Gly  Gln His Pro
    5150                5155                5160

Arg Ala  Leu Gly Cys Arg Ser  Leu Arg Glu Lys Gln  Gly Gly His
    5165                5170                5175
```

```
Arg Arg  Gly Asp Arg Ser Arg  Gly His Arg Leu Tyr  Arg Gly Ala
    5180                5185                5190

Gly Arg  Phe Cys Arg Cys Gly  Ser Gly Arg Gly Gly  Asn Arg Lys
    5195                5200                5205

Asp Ser  His Pro Ala Gly Gly  Glu Gly Gln Gln Gly  Gln Glu Leu
    5210                5215                5220

Gln Arg  Ala Arg Gly Gln Glu  Lys His Arg Leu Pro  Gln Leu Val
    5225                5230                5235

Pro Gly  Leu Gln Leu Arg Arg  Pro Arg Glu Gly Arg  Ala Leu Leu
    5240                5245                5250

Asp Ala  Ala His His Leu Gly  Arg His Leu Arg Arg  Gly Ala Ser
    5255                5260                5265

Leu Leu  Val Ala Ala Arg His  Asp Ala Arg Pro Gly  His Leu Pro
    5270                5275                5280

Leu His  Ala Ser Ser Gln Leu  Pro Gly Gly Gly Arg  Arg Ala Pro
    5285                5290                5295

Ala Arg  Leu Leu Gln Glu Leu  Leu Gln Arg Ala Gly  Arg Leu Leu
    5300                5305                5310

Ala Ala  Ala Ala Arg Leu His  Leu Ala His Ala Arg  Leu Gln Pro
    5315                5320                5325

Leu Pro  Arg Glu Pro Asp Pro  Arg Pro Pro Ala Arg  Ala His His
    5330                5335                5340

Tyr His  Arg Gln Lys Arg Ser  Cys Ser His Arg Ser  Arg Asp Pro
    5345                5350                5355

Ala Ala  Ala Gln Gln Tyr Pro  Gly Ser Pro Ala Arg  Asp Arg His
    5360                5365                5370
```

```
Arg Gln  Thr Pro His Leu Pro  Leu Arg Leu Gln Gly  Pro Gly Arg
    5375                5380                5385

Ser Arg  Ala Ala Arg Pro Leu  Glu Pro His Leu Leu  Lys Asn Val
    5390                5395                5400

His Ser  His Leu Ala Gln His  Arg Leu Gly Pro Ala  Arg Ala Gln
    5405                5410                5415

Gln Asp  Val Arg Arg Arg Ser  Pro Thr Leu His Ala  Thr Pro Arg
    5420                5425                5430

Ala Arg  Ala Arg Ala Leu Pro  Arg Ser Leu Gly Arg  Pro Gln Gly
    5435                5440                5445

Pro Arg  Ala Leu Ala His His  Arg Arg Arg Arg Asp  Arg Pro Gly
    5450                5455                5460

Gly Gly  Arg Arg Ala Gln Leu  His Ala Arg Arg Arg  Ala Arg Leu
    5465                5470                5475

His Arg  Gly Arg Arg His Arg  Gln Arg Gly Gly Arg  Arg Ala Pro
    5480                5485                5490

Val Arg  Pro His Gln Glu Pro  Ala Ala Ala His Arg  Pro Ala Ala
    5495                5500                5505

Pro Glu  His Pro Arg His Ala  Arg Gly Ala Ser Leu  Ala Ala Gln
    5510                5515                5520

Gly Gln  Ala His Gly Thr Gln  Gly His Ala Gln Gly  Gly Gln Thr
    5525                5530                5535

Arg Gly  Leu Arg Gln Gln Gln  Arg Arg Gln Asp Pro  Gln Thr Arg
    5540                5545                5550

Gly His  Gly Gly Gly Gly Gly  His Arg Gln His Val  Pro Pro Ala
    5555                5560                5565
```

```
Ala Arg  Gln Arg Val Leu Gly  Ala Arg Arg Arg His  Arg Cys Ala
    5570                5575                5580

Arg Ala  Arg Ala His Pro Pro  Pro Ser His Leu Lys  Met Leu Thr
    5585                5590                5595

Ser Arg  Cys Cys Val Pro Ala  Ala Arg Arg Met Ser  Lys Arg Lys
    5600                5605                5610

Tyr Lys  Glu Glu Met Leu Gln  Val Ile Ala Pro Glu  Ile Tyr Gly
    5615                5620                5625

Pro Ala  Ala Ala Val Lys Glu  Glu Arg Lys Pro Arg  Lys Leu Lys
    5630                5635                5640

Arg Val  Lys Lys Asp Lys Lys  Glu Glu Glu Asp Asp  Gly Leu Val
    5645                5650                5655

Glu Phe  Val Arg Glu Phe Ala  Pro Arg Arg Arg Val  Gln Trp Arg
    5660                5665                5670

Gly Arg  Lys Val Lys Pro Val  Leu Arg Pro Gly Thr  Thr Val Val
    5675                5680                5685

Phe Thr  Pro Gly Glu Arg Ser  Gly Ser Ala Ser Lys  Arg Ser Tyr
    5690                5695                5700

Asp Glu  Val Tyr Gly Asp Glu  Asp Ile Leu Glu Gln  Ala Val Glu
    5705                5710                5715

Arg Leu  Gly Glu Phe Ala Tyr  Gly Lys Arg Ser Arg  Pro Ala Pro
    5720                5725                5730

Leu Lys  Glu Glu Ala Val Ser  Ile Pro Leu Asp His  Gly Asn Pro
    5735                5740                5745

Thr Pro  Ser Leu Lys Pro Val  Thr Leu Gln Gln Val  Leu Pro Ser
    5750                5755                5760
```

```
Ala Ala  Pro Arg Arg Gly Phe  Lys Arg Glu Gly Gly  Glu Asp Leu
    5765                5770                5775

Tyr Pro  Thr Met Gln Leu Met  Val Pro Lys Arg Gln  Lys Leu Glu
    5780                5785                5790

Asp Val  Leu Glu His Met Lys  Val Asp Pro Glu Val  Gln Pro Glu
    5795                5800                5805

Val Lys  Val Arg Pro Ile Lys  Gln Val Ala Pro Gly  Leu Gly Val
    5810                5815                5820

Gln Thr  Val Asp Ile Lys Ile  Pro Thr Glu Pro Met  Glu Thr Gln
    5825                5830                5835

Thr Glu  Pro Val Lys Pro Ser  Thr Ser Thr Met Glu  Val Gln Thr
    5840                5845                5850

Asp Pro  Trp Met Pro Ala Pro  Ala Ser Thr Ser Thr  Arg Arg Arg
    5855                5860                5865

Arg Lys  Tyr Gly Ala Ala Ser  Leu Leu Met Pro Asn  Tyr Ala Leu
    5870                5875                5880

His Pro  Ser Ile Ile Pro Thr  Pro Gly Tyr Arg Gly  Thr Arg Phe
    5885                5890                5895

Tyr Arg  Gly Tyr Thr Ser Ser  Arg Arg Arg Lys Thr  Thr Thr Arg
    5900                5905                5910

Arg Arg  Arg Arg Ser Arg Arg  Ser Ser Thr Ala Thr  Ser Ala Leu
    5915                5920                5925

Val Arg  Arg Val Tyr Arg Ser  Gly Arg Glu Pro Leu  Thr Leu Pro
    5930                5935                5940

Arg Ala  Arg Tyr His Pro Ser  Ile Ala Ile Leu Pro  Pro Pro Thr
    5945                5950                5955
```

```
Cys Arg  Tyr Gly Pro His Met  Pro Pro Pro Arg Pro  His Tyr Gly
    5960                5965                5970

Leu Pro  Arg Lys Lys Ala Ala  Pro Lys Ala Asp Gly  Glu Arg Ala
    5975                5980                5985

Ala Ser  Pro Ser Pro Pro Ala  Ala Ala Arg His Gln  Gln Ala Val
    5990                5995                6000

Gly Gly  Arg Leu Pro Ala Arg  Ala Asp Pro His His  Arg Arg Gly
    6005                6010                6015

Asp Arg  Gly Asp Pro Arg His  Ser Phe Arg Gly Gly  Ala Gly Leu
    6020                6025                6030

Ser Ala  Pro Leu Arg His Lys  Lys Ala Trp Ile Cys  Asn Lys Lys
    6035                6040                6045

Lys Asn  Gly Leu Thr Leu Leu  Val Leu Cys Val Phe  Leu Asp Gly
    6050                6055                6060

Arg His  Gln Phe Phe Val Pro  Gly Thr Ala Thr Arg  His Ala Ala
    6065                6070                6075

Val Tyr  Gly His Leu Glu Arg  His Arg Gln Gln Pro  Thr Glu Arg
    6080                6085                6090

Gly Arg  Leu Gln Leu Glu Gln  Ser Leu Glu Arg Ala  Glu Phe Arg
    6095                6100                6105

Val His  Ala Gln Asn Leu Trp  Gln Gln Gly Val Glu  Gln Gln His
    6110                6115                6120

Arg Ala  Gly Ala Glu Gly Lys  Ala Glu Arg Thr Glu  Leu Pro Ala
    6125                6130                6135

Glu Gly  Gly Trp Pro Gly Leu  Arg His Gln Arg Gly  Gly Pro Gly
    6140                6145                6150
```

```
Gln Pro  Gly Arg Ala Glu Thr  Asp Gln Gln Pro Pro  Gly Arg Gly
    6155                 6160                 6165

Pro Ala  Arg Gly Val Arg Gly  Asp Ala Pro Gly Gly  Gly Gly Ala
    6170                 6175                 6180

Ala Ser  Pro Gly Gln Ala Arg  Arg Gln Ala Thr Ala  Ser Arg Arg
    6185                 6190                 6195

Gly Gly  Asp Ala Ala Asp Ala  His Gly Arg Ala Ala  Pro Val Arg
    6200                 6205                 6210

Gly Gly  Gly Glu Thr Gly Pro  Ala His His Ala Ala  Arg Gly Ala
    6215                 6220                 6225

Ser Gly  His Arg Ser Ala Glu  Thr Gln Gln Gln Pro  Ala Arg Asp
    6230                 6235                 6240

Pro Gly  Leu Ala Ser Ala Ser  Pro Leu His Ser Gly  Ala Pro Ala
    6245                 6250                 6255

Ala Gly  Gly Arg Arg Val Ala  Arg Pro Pro Arg Pro  Pro Pro Gly
    6260                 6265                 6270

Glu Leu  Ala Glu His Ser Glu  Gln His Arg Gly Ser  Gly Ser Ala
    6275                 6280                 6285

Glu Cys  Glu Ala Pro Pro Leu  Leu Leu Lys Asp Thr  Val Ala Leu
    6290                 6295                 6300

Asn Leu  Leu Val Cys Val Tyr  Met Tyr Val Arg Arg  Pro Glu Gly
    6305                 6310                 6315

Gly Val  Arg Gly Ala Ser Pro  Ser Cys Lys Met Ala  Thr Pro Ser
    6320                 6325                 6330

Met Leu  Pro Gln Trp Ala Tyr  Met His Ile Ala Gly  Gln Asp Ala
    6335                 6340                 6345
```

```
Ser Glu  Tyr Leu Ser Pro Gly  Leu Val Gln Phe Ala  Arg Ala Thr
    6350                 6355                 6360

Asp Thr  Tyr Phe Ser Leu Gly  Asn Lys Phe Arg Asn  Pro Thr Val
    6365                 6370                 6375

Ala Pro  Thr His Asp Val Thr  Thr Asp Arg Ser Gln  Arg Leu Thr
    6380                 6385                 6390

Leu Arg  Phe Val Pro Val Asp  Arg Glu Asp Asn Thr  Tyr Ser Tyr
    6395                 6400                 6405

Lys Val  Arg Tyr Thr Leu Ala  Val Gly Asp Asn Arg  Val Leu Asp
    6410                 6415                 6420

Met Ala  Ser Thr Tyr Phe Asp  Ile Arg Gly Val Leu  Asp Arg Gly
    6425                 6430                 6435

Pro Ser  Phe Lys Pro Tyr Ser  Gly Thr Ala Tyr Asn  Ser Leu Ala
    6440                 6445                 6450

Pro Lys  Gly Ala Pro Asn Ser  Ser Gln Trp Glu Gln  Ala Lys Thr
    6455                 6460                 6465

Gly Asn  Gly Gly Thr Met Glu  Thr His Thr Tyr Gly  Val Ala Pro
    6470                 6475                 6480

Met Gly  Gly Glu Asn Ile Thr  Lys Asp Gly Leu Gln  Ile Gly Thr
    6485                 6490                 6495

Asp Val  Thr Ala Asn Gln Asn  Lys Pro Ile Tyr Ala  Asp Lys Thr
    6500                 6505                 6510

Phe Gln  Pro Glu Pro Gln Val  Gly Glu Glu Asn Trp  Gln Glu Thr
    6515                 6520                 6525

Glu Asn  Phe Tyr Gly Gly Arg  Ala Leu Lys Lys Asp  Thr Asn Met
    6530                 6535                 6540
```

```
Lys Pro  Cys Tyr Gly Ser Tyr  Ala Arg Pro Thr Asn  Glu Lys Gly
    6545                6550                6555

Gly Gln  Ala Lys Leu Lys Val  Gly Asp Asp Gly Val  Pro Thr Lys
    6560                6565                6570

Glu Phe  Asp Ile Asp Leu Ala  Phe Phe Asp Thr Pro  Gly Gly Thr
    6575                6580                6585

Val Asn  Gly Gln Asp Glu Tyr  Lys Ala Asp Ile Val  Met Tyr Thr
    6590                6595                6600

Glu Asn  Thr Tyr Leu Glu Thr  Pro Asp Thr His Val  Val Tyr Lys
    6605                6610                6615

Pro Gly  Lys Asp Asp Ala Ser  Ser Glu Ile Asn Leu  Val Gln Gln
    6620                6625                6630

Ser Met  Pro Asn Arg Pro Asn  Tyr Ile Gly Phe Arg  Asp Asn Phe
    6635                6640                6645

Ile Gly  Leu Met Tyr Tyr Asn  Ser Thr Gly Asn Met  Gly Val Leu
    6650                6655                6660

Ala Gly  Gln Ala Ser Gln Leu  Asn Ala Val Val Asp  Leu Gln Asp
    6665                6670                6675

Arg Asn  Thr Glu Leu Ser Tyr  Gln Leu Leu Leu Asp  Ser Leu Gly
    6680                6685                6690

Asp Arg  Thr Arg Tyr Phe Ser  Met Trp Asn Gln Ala  Val Asp Ser
    6695                6700                6705

Tyr Asp  Pro Asp Val Arg Ile  Ile Glu Asn His Gly  Val Glu Asp
    6710                6715                6720

Glu Leu  Pro Asn Tyr Cys Phe  Pro Leu Asp Gly Ser  Gly Thr Asn
    6725                6730                6735
```

```
Ala Ala  Tyr Gln Gly Val Lys  Val Lys Asp Gly Gln  Asp Gly Asp
    6740                 6745                 6750

Val Glu  Ser Glu Trp Glu Asn  Asp Asp Thr Val Ala  Ala Arg Asn
    6755                 6760                 6765

Gln Leu  Cys Lys Gly Asn Ile  Phe Ala Met Glu Ile  Asn Leu Gln
    6770                 6775                 6780

Ala Asn  Leu Trp Arg Ser Phe  Leu Tyr Ser Asn Val  Ala Leu Tyr
    6785                 6790                 6795

Leu Pro  Asp Ser Tyr Lys Tyr  Thr Pro Thr Asn Val  Thr Leu Pro
    6800                 6805                 6810

Thr Asn  Thr Asn Thr Tyr Asp  Tyr Met Asn Gly Arg  Val Thr Pro
    6815                 6820                 6825

Pro Ser  Leu Val Asp Ala Tyr  Leu Asn Ile Gly Ala  Arg Trp Ser
    6830                 6835                 6840

Leu Asp  Pro Met Asp Asn Val  Asn Pro Phe Asn His  His Arg Asn
    6845                 6850                 6855

Ala Gly  Leu Arg Tyr Arg Ser  Met Leu Leu Gly Asn  Gly Arg Tyr
    6860                 6865                 6870

Val Pro  Phe His Ile Gln Val  Pro Gln Lys Phe Phe  Ala Ile Lys
    6875                 6880                 6885

Ser Leu  Leu Leu Leu Pro Gly  Ser Tyr Thr Tyr Glu  Trp Asn Phe
    6890                 6895                 6900

Arg Lys  Asp Val Asn Met Ile  Leu Gln Ser Ser Leu  Gly Asn Asp
    6905                 6910                 6915

Leu Arg  Thr Asp Gly Ala Ser  Ile Ala Phe Thr Ser  Ile Asn Leu
    6920                 6925                 6930
```

```
Tyr Ala  Thr Phe Phe Pro Met  Ala His Asn Thr Ala  Ser Thr Leu
    6935                6940                6945

Glu Ala  Met Leu Arg Asn Asp  Thr Asn Asp Gln Ser  Phe Asn Asp
    6950                6955                6960

Tyr Leu  Ser Ala Ala Asn Met  Leu Tyr Pro Ile Pro  Ala Asn Ala
    6965                6970                6975

Thr Asn  Val Pro Ile Ser Ile  Pro Ser Arg Asn Trp  Ala Ala Phe
    6980                6985                6990

Arg Gly  Trp Ser Phe Thr Arg  Leu Lys Thr Arg Glu  Thr Pro Ser
    6995                7000                7005

Leu Gly  Ser Gly Phe Asp Pro  Tyr Phe Val Tyr Ser  Gly Ser Ile
    7010                7015                7020

Pro Tyr  Leu Asp Gly Thr Phe  Tyr Leu Asn His Thr  Phe Lys Lys
    7025                7030                7035

Val Ser  Ile Thr Phe Asp Ser  Ser Val Ser Trp Pro  Gly Asn Asp
    7040                7045                7050

Arg Leu  Leu Thr Pro Asn Glu  Phe Glu Ile Lys Arg  Thr Val Asp
    7055                7060                7065

Gly Glu  Gly Tyr Asn Val Ala  Gln Cys Asn Met Thr  Lys Asp Trp
    7070                7075                7080

Phe Leu  Val Gln Met Leu Ala  His Tyr Asn Ile Gly  Tyr Gln Gly
    7085                7090                7095

Phe Tyr  Val Pro Glu Gly Tyr  Lys Asp Arg Met Tyr  Ser Phe Phe
    7100                7105                7110

Arg Asn  Phe Gln Pro Met Ser  Arg Gln Val Val Asp  Glu Val Asn
    7115                7120                7125
```

```
Tyr Lys  Asp Tyr Gln Ala Val  Thr Leu Ala Tyr Gln  His Asn Asn
    7130                7135                7140

Ser Gly  Phe Val Gly Tyr Leu  Ala Pro Thr Met Arg  Gln Gly Gln
    7145                7150                7155

Pro Tyr  Pro Ala Asn Tyr Pro  Tyr Pro Leu Ile Gly  Lys Ser Ala
    7160                7165                7170

Val Ala  Ser Val Thr Gln Lys  Lys Phe Leu Cys Asp  Arg Val Met
    7175                7180                7185

Trp Arg  Ile Pro Phe Ser Ser  Asn Phe Met Ser Met  Gly Ala Leu
    7190                7195                7200

Thr Asp  Leu Gly Gln Asn Met  Leu Tyr Ala Asn Ser  Ala His Ala
    7205                7210                7215

Leu Asp  Met Asn Phe Glu Val  Asp Pro Met Asp Glu  Ser Thr Leu
    7220                7225                7230

Leu Tyr  Val Val Phe Glu Val  Phe Asp Val Val Arg  Val His Gln
    7235                7240                7245

Pro His  Arg Gly Val Ile Glu  Ala Val Tyr Leu Arg  Thr Pro Phe
    7250                7255                7260

Ser Ala  Gly Asn Ala Thr Thr  Ala Ala Leu Ala Ser  Cys Lys Met
    7265                7270                7275

Thr Ala  Gly Ser Gly Glu Gln  Glu Leu Arg Ala Ile  Leu Arg Asp
    7280                7285                7290

Leu Gly  Cys Gly Pro Cys Phe  Leu Gly Thr Phe Asp  Lys Arg Phe
    7295                7300                7305

Pro Gly  Phe Met Ala Pro His  Lys Leu Ala Cys Ala  Ile Val Asn
    7310                7315                7320
```

```
Thr Ala  Gly Arg Glu Thr Gly  Gly Glu His Trp Leu  Ala Phe Ala
    7325                 7330                 7335

Trp Asn  Pro Arg Ser His Thr  Cys Tyr Leu Phe Asp  Pro Phe Gly
    7340                 7345                 7350

Phe Ser  Asp Glu Arg Leu Lys  Gln Ile Tyr Gln Phe  Glu Tyr Glu
    7355                 7360                 7365

Gly Leu  Leu Arg Arg Ser Ala  Leu Ala Thr Glu Asp  Arg Cys Val
    7370                 7375                 7380

Thr Leu  Glu Lys Ser Thr Gln  Thr Val Gln Gly Pro  Arg Ser Ala
    7385                 7390                 7395

Ala Cys  Gly Leu Phe Cys Cys  Met Phe Leu His Ala  Phe Val His
    7400                 7405                 7410

Trp Pro  Asp Arg Pro Met Asp  Lys Asn Pro Thr Met  Asn Leu Leu
    7415                 7420                 7425

Thr Gly  Val Pro Asn Gly Met  Leu Gln Ser Pro Gln  Val Glu Pro
    7430                 7435                 7440

Thr Leu  Arg Arg Asn Gln Glu  Ala Leu Tyr Arg Phe  Leu Asn Ala
    7445                 7450                 7455

His Ser  Ala Tyr Phe Arg Ser  His Arg Ala Arg Ile  Glu Lys Ala
    7460                 7465                 7470

Thr Ala  Phe Asp Arg Met Asn  Gln Asp Met Lys Thr  Gly Val Cys
    7475                 7480                 7485

Met Met  Leu Tyr Ser Thr Ala  His Val Tyr Ala Thr  Phe Ser Glu
    7490                 7495                 7500

Ala Leu  Thr Leu Phe Arg Asn  Arg Arg Gly Ser Ala  Gly Ser Arg
    7505                 7510                 7515
```

```
His Gly  Pro Arg Ala Gly Ile  Arg Cys Gly Thr Gly  Thr Trp Ala
    7520                 7525                 7530

Ala Thr  Thr Arg Gly Ser Ala  Ala Trp Ala Arg Gly  Gly Arg Gly
    7535                 7540                 7545

Thr Ser  Arg Ser Thr Ala Cys  Ala Val Ala Gly Arg  Pro Ala Gly
    7550                 7555                 7560

Arg Ala  Arg Arg Ser Asn Arg  Ser Trp Asp Pro Arg  Ser Ala Arg
    7565                 7570                 7575

Glu Ser  Cys Gly Thr Arg Gly  Cys Ser Thr Gly Thr  Pro Ser Gly
    7580                 7585                 7590

Pro Gly  Ala Ser Arg Leu Pro  Ala Pro Ser Arg Arg  Cys Pro Pro
    7595                 7600                 7605

Arg Pro  Asp Pro Arg Arg Trp  Pro Ser Arg Arg Gly  Ser Ser Cys
    7610                 7615                 7620

Arg Ser  Ala Ala Pro Cys Trp  Ala Arg Ser Arg Ala  Cys Gly Cys
    7625                 7630                 7635

Asn Arg  Ser Ala Gly Gly Ser  Ala Ser Ser Gly Pro  Ala Arg Ser
    7640                 7645                 7650

Ser Cys  Pro Gly Thr Trp Pro  Ser Lys Pro Pro Ala  Gly Gly Arg
    7655                 7660                 7665

Pro Ala  Ala Pro Cys Arg Pro  Arg Arg Arg Pro Arg  Arg Thr Cys
    7670                 7675                 7680

Arg Thr  Gly Trp Trp Arg Ser  Arg Arg Arg Ala Arg  Ser Ser Ala
    7685                 7690                 7695

Arg Arg  Cys Trp Pro Ala Ala  Pro Arg Cys Ala Pro  Ser Gly Ser
    7700                 7705                 7710
```

```
Gly Ser  Trp Pro Gly Trp Gly  Ser Pro Ser Ala Arg  Ala Ala Arg
    7715                 7720                 7725

Ser Arg  Ser Pro His Pro Ser  Arg Cys Ala Pro Ser  Gly Ser Ser
    7730                 7735                 7740

Arg Ser  Arg Ala Gly Thr Ala  Ala Cys Pro Arg Leu  Arg Cys Ser
    7745                 7750                 7755

Arg Ala  Ala Thr Ala Arg Ser  Arg Cys Thr Pro Ser  Ser Cys Gly
    7760                 7765                 7770

Arg Ser  Gly Ser Ala Ser Ala  Arg Ser Pro Ala Gly  Ser Gly Pro
    7775                 7780                 7785

Ser Ser  Arg Ser Gly Ser Cys  Cys Trp Arg Ser Ala  Gly Cys Arg
    7790                 7795                 7800

Gly Ala  Pro Arg Ser His Thr  Gly Gly Arg Cys Gly  Gly Thr Pro
    7805                 7810                 7815

Arg Pro  Ala Arg Ala Ser Ala  Gly Arg Arg Thr Ser  Gly Arg Ser
    7820                 7825                 7830

Pro Arg  Gly Thr Gly Pro Ser  Ala Ala Ser Ser Leu  Pro Cys Pro
    7835                 7840                 7845

Ser Pro  Arg Pro Lys Arg Ser  Ala Gly Ser Gly Gly  Ser Ser Pro
    7850                 7855                 7860

Pro Leu  Ser Ser Ser Pro Pro  Pro Arg Ser Gly Gly  Arg Ser Arg
    7865                 7870                 7875

Pro Gly  Ser Gln Thr Leu Ala  Cys Arg Pro Ser Arg  Cys Ala Arg
    7880                 7885                 7890

Gly Glu  Ser Ser Pro Arg Pro  Pro Ala Pro Pro Arg  Pro Ala Phe
    7895                 7900                 7905
```

```
Arg Pro  Arg Cys Pro Gly Cys  Leu Ala Lys Ala His  Ala Trp Ser
    7910                 7915                 7920

Cys Gly  Val Ser Phe Trp Ala  Ala Glu Ala Ala Ala  Met Cys Trp
    7925                 7930                 7935

Glu Ser  Ala Ser Ser Arg Ser  Pro Arg Leu Phe Leu  Leu Leu Gly
    7940                 7945                 7950

Arg Arg  Pro Arg Pro Arg Gly  Gly Arg His Ala Ser  Ser Gly Ala
    7955                 7960                 7965

Glu Ala  Glu Ala Thr Gly Ser  Arg Gly Ser Ala Gly  Gly Trp Gln
    7970                 7975                 7980

Ser Pro  Phe Arg Val Arg Gly  Cys Ala Pro Gly Gly  Ala Ala Leu
    7985                 7990                 7995

Thr Asp  Phe Leu Arg Gly Arg  Pro Leu Cys Ser Pro  Arg Glu Gln
    8000                 8005                 8010

Gln Gln  Ala Trp Arg Leu Ser  His Arg Arg Gln His  Arg His Leu
    8015                 8020                 8025

Pro Pro  Pro Pro Pro Pro Thr  Arg Thr Ser Ser Arg  Met Lys Ala
    8030                 8035                 8040

Pro Pro  Arg Arg Pro Ala Pro  Pro Pro Thr Pro Arg  Pro Gln Thr
    8045                 8050                 8055

Cys Lys  Arg Trp Arg Asn Pro  Ser Arg Leu Thr Trp  Ala Thr Arg
    8060                 8065                 8070

Pro Arg  Ser Thr Arg Arg Ser  Trp Gln Arg Ala Phe  Gln Pro Arg
    8075                 8080                 8085

Lys Arg  Thr Thr Lys Ser Ser  Gln Ser Arg Lys Gln  Arg Thr Ser
    8090                 8095                 8100
```

```
Arg Thr  Arg Leu Gly Thr Ser  Met Ala Thr Thr Ala  Gly Gln Arg
    8105                8110                8115

Thr Cys  Ser Ser Ser Ile Trp  Pro Ala Asn Ala Ser  Ser Ser Arg
    8120                8125                8130

Thr Arg  Cys Ser Thr Ala Pro  Arg Cys Pro Ser Ala  Trp Arg Ser
    8135                8140                8145

Ser Ala  Ala Pro Thr Ser Ala  Thr Ser Ser Arg Arg  Ala Cys Pro
    8150                8155                8160

Pro Ser  Ala Ser Pro Thr Ala  Pro Val Ser Pro Thr  Arg Ala Ser
    8165                8170                8175

Thr Ser  Thr Arg Ser Ser Arg  Cys Pro Arg Pro Trp  Pro Pro Thr
    8180                8185                8190

Thr Ser  Phe Ser Arg Thr Lys  Gly Ser Pro Ser Pro  Ala Ala Pro
    8195                8200                8205

Thr Ala  Pro Ala Pro Thr Pro  Cys Ser Thr Trp Ala  Pro Ala Pro
    8210                8215                8220

Ala Tyr  Leu Ile Ser Pro Pro  Trp Lys Arg Phe Pro  Arg Ser Ser
    8225                8230                8235

Arg Val  Trp Ala Ala Thr Arg  Leu Gly Pro Arg Thr  Leu Cys Lys
    8240                8245                8250

Glu Ala  Glu Arg Ser Met Ser  Thr Thr Ala Pro Trp  Trp Ser Trp
    8255                8260                8265

Lys Ala  Thr Thr Arg Ala Trp  Arg Ser Ser Ser Ala  Arg Ser Ser
    8270                8275                8280

Pro Thr  Ser Pro Thr Arg Arg  Ser Thr Cys Pro Pro  Arg Ser Ala
    8285                8290                8295
```

```
Pro Ser  Trp Thr Arg Cys Ser  Ser Ser Ala Pro Arg  Pro Ser Arg
    8300                 8305                 8310

Arg Arg  Arg Cys Arg Thr Pro  Arg Val Arg Thr Arg  Ala Ser Pro
    8315                 8320                 8325

Trp Ser  Ala Thr Ser Ser Trp  Arg Ala Gly Trp Glu  Arg Val Ala
    8330                 8335                 8340

Pro Pro  Arg Ala Trp Lys Ser  Gly Ala Ser Ser Trp  Pro Trp Ser
    8345                 8350                 8355

Trp Pro  Trp Ser Trp Ser Val  Cys Ala Ala Ser Leu  Pro Thr Arg
    8360                 8365                 8370

Arg Pro  Cys Ala Arg Ser Arg  Arg Thr Cys Thr Thr  Ser Ser Gly
    8375                 8380                 8385

Thr Gly  Ser Cys Ala Arg Pro  Ala Arg Ser Pro Thr  Trp Ser Pro
    8390                 8395                 8400

Thr Trp  Ser Pro Thr Trp Ala  Ser Cys Thr Arg Thr  Ala Trp Gly
    8405                 8410                 8415

Lys Thr  Cys Cys Thr Pro Pro  Cys Ala Gly Arg Pro  Ala Ala Thr
    8420                 8425                 8430

Thr Ser  Ala Thr Ala Ser Thr  Cys Thr Ser Ala Thr  Pro Gly Arg
    8435                 8440                 8445

Arg Ala  Trp Ala Cys Gly Ser  Ser Ala Trp Arg Ser  Arg Thr Lys
    8450                 8455                 8460

Ser Ser  Ala Ser Ser Cys Arg  Arg Thr Ser Arg Pro  Cys Gly Pro
    8465                 8470                 8475

Gly Ser  Thr Ser Val Pro Pro  Pro Arg Thr Trp Pro  Thr Ser Ser
    8480                 8485                 8490
```

```
Ser Pro  Ser Ala Cys Gly Arg  Cys Ala Thr Gly Cys  Pro Thr Leu
    8495                8500                8505

Ala Lys  Ala Cys Cys Lys Thr  Phe Ala Leu Ser Ser  Ser Asn Ala
    8510                8515                8520

Pro Gly  Ser Cys Pro Pro Pro  Ala Pro Arg Cys Pro  Arg Thr Ser
    8525                8530                8535

Cys Arg  Pro Ser Ala Ser Ala  Pro Arg Arg Ser Gly  Ala Thr Ala
    8540                8545                8550

Thr Cys  Cys Ala Trp Pro Thr  Thr Trp Pro Thr Thr  Arg Thr Ser
    8555                8560                8565

Arg Thr  Ser Ala Ala Arg Val  Cys Trp Ser Ala Thr  Ala Ala Ala
    8570                8575                8580

Thr Ser  Ala Arg Arg Thr Ala  Pro Trp Pro Ala Thr  Pro Ser Cys
    8585                8590                8595

Ala Arg  Pro Arg Ser Ser Ala  Pro Ser Ser Cys Lys  Ala Pro Ala
    8600                8605                8610

Thr Ala  Arg Ala Arg Gly Val  Asn Ser Pro Arg Gly  Cys Gly Pro
    8615                8620                8625

Arg Pro  Thr Cys Ala Ser Ser  Cys Pro Arg Thr Thr  Ile Pro Ser
    8630                8635                8640

Arg Ser  Gly Ser Thr Arg Thr  Asn Pro Ser Arg Pro  Arg Pro Ser
    8645                8650                8655

Cys Arg  Pro Ala Ser Ser Pro  Arg Gly Pro Ser Trp  Pro Asn Cys
    8660                8665                8670

Lys Pro  Ser Arg Asn Pro Ala  Lys Asn Phe Cys Lys  Arg Ala Thr
    8675                8680                8685
```

```
Gly Ser  Thr Trp Thr Pro Arg  Pro Glu Arg Ser Ser  Thr Pro Ala
    8690                 8695                 8700

Ser Pro  Arg Met Pro Arg Gly  Ser Ser Lys Lys Leu  Lys Val Glu
    8705                 8710                 8715

Leu Pro  Pro Pro Glu Asp Leu  Glu Glu Asp Trp Glu  Ser Ser Gln
    8720                 8725                 8730

Ala Glu  Glu Glu Glu Met Glu  Asp Trp Asp Ser Thr  Gln Ala Glu
    8735                 8740                 8745

Glu Asp  Ser Leu Gln Asp Ser  Leu Glu Glu Glu Asp  Glu Val Glu
    8750                 8755                 8760

Glu Ala  Glu Glu Glu Ala Ala  Ala Ala Arg Pro Ser  Ser Ser Ala
    8765                 8770                 8775

Glu Lys  Ala Ser Ser Thr Asp  Thr Ile Ser Ala Pro  Gly Arg Gly
    8780                 8785                 8790

Arg Gly  Gly Arg Ala His Ser  Arg Trp Asp Glu Thr  Gly Arg Phe
    8795                 8800                 8805

Pro Asn  Pro Thr Thr Gln Thr  Gly Lys Lys Glu Arg  Gln Gly Tyr
    8810                 8815                 8820

Lys Ser  Trp Arg Gly His Lys  Asn Ala Ile Val Ser  Cys Leu Gln
    8825                 8830                 8835

Ala Cys  Gly Gly Asn Ile Ser  Phe Thr Arg Arg Tyr  Leu Leu Phe
    8840                 8845                 8850

His Arg  Gly Val Asn Phe Pro  Arg Asn Ile Leu His  Tyr Tyr Arg
    8855                 8860                 8865

His Leu  His Ser Pro Tyr Tyr  Cys Phe Gln Glu Glu  Ala Glu Thr
    8870                 8875                 8880
```

```
Gln Gln  Gln Gln Lys Thr Ser  Gly Ser Ser Ser Lys  Ile His Ser
    8885                 8890                 8895

Gly Gly  Arg Trp Thr Glu Asp  Arg Gly Glu Arg Ala  Gly Ala Asp
    8900                 8905                 8910

Pro Gly  Ala Glu Glu Pro Asp  Leu Ser His Pro Leu  Cys His Leu
    8915                 8920                 8925

Pro Ala  Glu Ser Gly Ala Gly  Ala Gly Thr Glu Ser  Gln Glu Pro
    8930                 8935                 8940

Phe Ser  Ala Leu Ala His Pro  Gln Leu Ser Val Ser  Gln Glu Arg
    8945                 8950                 8955

Arg Pro  Thr Ser Ala His Ser  Arg Gly Arg Arg Gly  Ser Leu Gln
    8960                 8965                 8970

Gln Val  Leu Arg Ala His Ser  Arg Val Ala Arg Ala  Arg Pro His
    8975                 8980                 8985

Thr Glu  Lys Gly Gly Asn Tyr  Val Thr Thr Cys Ala  Leu Arg Pro
    8990                 8995                 9000

Thr Ile  Met Ser Lys Glu Ile  Pro Thr Pro Tyr Met  Trp Ser Tyr
    9005                 9010                 9015

Gln Pro  Gln Met Gly Leu Ala  Ala Gly Ala Ala Gln  Asp Tyr Ser
    9020                 9025                 9030

Thr Arg  Met Asn Trp Leu Ser  Ala Gly Pro Ala Met  Ile Ser Arg
    9035                 9040                 9045

Val Asn  Asp Ile Arg Ala His  Arg Asn Gln Ile Leu  Leu Glu Gln
    9050                 9055                 9060

Ser Ala  Ile Thr Ala Thr Pro  Arg His His Leu Asn  Pro Arg Asn
    9065                 9070                 9075
```

```
Trp Pro  Ala Ala Leu Val Tyr  Gln Glu Ile Pro Gln  Pro Thr Thr
    9080                9085                9090

Val Leu  Leu Pro Arg Asp Ala  Gln Ala Glu Val Gln  Leu Thr Asn
    9095                9100                9105

Ser Gly  Val Gln Leu Ala Gly  Gly Ala Ala Leu Cys  Arg His Arg
    9110                9115                9120

Pro Ala  Gln Gly Ile Lys Arg  Leu Val Ile Arg Gly  Arg Gly Thr
    9125                9130                9135

Gln Leu  Asn Asp Glu Val Val  Ser Ser Ser Leu Gly  Leu Arg Pro
    9140                9145                9150

Asp Gly  Val Phe Gln Leu Ala  Gly Ser Gly Arg Ser  Ser Phe Thr
    9155                9160                9165

Pro Arg  Gln Ala Val Leu Thr  Leu Glu Ser Ser Ser  Ser Gln Pro
    9170                9175                9180

Arg Ser  Gly Gly Ile Gly Thr  Leu Gln Phe Val Glu  Glu Phe Thr
    9185                9190                9195

Pro Ser  Val Tyr Phe Asn Pro  Phe Ser Gly Ser Pro  Gly His Tyr
    9200                9205                9210

Pro Asp  Glu Phe Ile Pro Asn  Phe Asp Ala Ile Ser  Glu Ser Val
    9215                9220                9225

Asp Gly  Tyr Asp Met Ser His  Gly Gly Ala Ala Asp  Leu Ala Arg
    9230                9235                9240

Leu Arg  His Leu Asp His Cys  Arg Arg Phe Arg Cys  Phe Ala Arg
    9245                9250                9255

Asp Leu  Ala Glu Phe Ala Tyr  Phe Glu Leu Pro Glu  Glu His Pro
    9260                9265                9270
```

```
Gln Gly  Pro Ala His Gly Val  Arg Ile Ile Val Glu  Gly Gly Leu
    9275                9280                9285

Asp Ser  His Leu Leu Arg Ile  Phe Ser Gln Arg Pro  Ile Leu Val
    9290                9295                9300

Glu Arg  Glu Gln Gly Gln Thr  Leu Leu Thr Leu Tyr  Cys Ile Cys
    9305                9310                9315

Asn His  Pro Gly Leu His Glu  Ser Leu Cys Cys Leu  Leu Cys Thr
    9320                9325                9330

Glu Tyr  Asn Lys Ser Asp Gln  Arg Leu Leu Arg Thr  Arg Leu Trp
    9335                9340                9345

Cys Ser  Cys Tyr Gln Pro Val  Pro Val Leu His Arg  Glu Arg Asp
    9350                9355                9360

Arg Ala  Pro Ala Pro Val Ala  Pro Gln Glu Val Pro  His Leu Ala
    9365                9370                9375

Val Pro  Gly Leu Pro Asp Arg  Arg Cys Gln Pro Leu  Arg Gln Arg
    9380                9385                9390

Arg Ser  Pro Ala Glu Arg Pro  Cys Gln Pro Tyr Phe  Phe His Pro
    9395                9400                9405

Gln Lys  Gln Ala Pro Ala Leu  Pro Thr Leu Pro Pro  Arg Asp Leu
    9410                9415                9420

Ser Val  Arg Leu Arg Thr Leu  Pro Ser His Leu Pro  Pro Asp Pro
    9425                9430                9435

Glu Tyr  His Ser Ala Ala Pro  Arg Tyr Gln Pro Asn  Tyr Pro Pro
    9440                9445                9450

Thr Pro  Pro Ser Arg Pro Phe  Leu Ile Tyr His Tyr  Arg Arg Trp
    9455                9460                9465
```

```
Leu Leu  Leu Leu Val Leu Pro  Arg Pro Val Asp Pro  Arg Ser Pro
    9470                 9475                 9480

Thr Gln  Ser Pro Glu Glu Val  Arg Lys Cys Lys Phe  Gln Glu Pro
    9485                 9490                 9495

Trp Lys  Phe Leu Lys Cys Tyr  Arg Gln Lys Ser Asp  Met His Pro
    9500                 9505                 9510

Ser Trp  Ile Met Ile Ile Gly  Ile Val Asn Ile Leu  Ala Cys Thr
    9515                 9520                 9525

Leu Ile  Ser Phe Val Ile Tyr  Pro Cys Phe Asp Phe  Gly Trp Asn
    9530                 9535                 9540

Ser Pro  Glu Ala Leu Tyr Leu  Pro Pro Glu Pro Asp  Thr Pro Pro
    9545                 9550                 9555

Gln Gln  Gln Pro Gln Ala His  Ala Leu Pro Pro Pro  Gln Pro Arg
    9560                 9565                 9570

Pro Gln  Tyr Met Pro Ile Leu  Asp Tyr Glu Ala Glu  Pro Gln Arg
    9575                 9580                 9585

Pro Met  Leu Pro Ala Ile Ser  Tyr Phe Asn Leu Thr  Gly Gly Asp
    9590                 9595                 9600

Asp Pro  Thr Gly Gln Gln Arg  Gln Arg Pro Ser Pro  Gly His Gly
    9605                 9610                 9615

Arg Pro  Arg Leu Gly Ala Ala  Thr Arg Pro Thr Ser  His Ser Ser
    9620                 9625                 9630

Ala Ala  Gly Glu Ser Arg Gln  Gly Ala Ala Gly Arg  His Ser His
    9635                 9640                 9645

Pro Pro  Val Gln Glu Arg His  Leu Leu Pro Gly Glu  Thr Gly Gln
    9650                 9655                 9660
```

```
Asp Leu  Leu Arg Gly His Pro  Asp Arg Pro Ser Pro  Leu Leu Arg
    9665                 9670                 9675

Ala Pro  Ala Ala Ala Pro Glu  Val His Leu Pro Gly  Arg Ser Gln
    9680                 9685                 9690

Pro His  Arg His His Pro Ala  Val Gly Arg Tyr Gln  Gly Val His
    9695                 9700                 9705

Pro Leu  Leu Leu Arg Leu Pro  Arg Leu Arg Pro His  Ser Asp Gln
    9710                 9715                 9720

Asp Pro  Leu Arg Pro Pro Arg  Pro Pro Pro His Glu  Leu Ile Thr
    9725                 9730                 9735

Pro Leu  Ser Ser Glu Ile Lys  Ile Ile Leu Met Met  Ile Ile Lys
    9740                 9745                 9750

Lys Ile  Ile Ile Phe Glu Ile  Lys Ile Gln Ser Tyr  Phe Glu Phe
    9755                 9760                 9765

Asn Lys  Asn Lys Glu Ser Leu  Thr Asn Leu Ile Pro  Gly Leu Cys
    9770                 9775                 9780

Pro Cys  Phe Leu Pro Thr Pro  Pro His Ser Pro Leu  Pro Ser Ser
    9785                 9790                 9795

Gly Thr  Ala Gly Pro Gly Gly  Leu Gln Thr Ser Ser  Thr Arg Arg
    9800                 9805                 9810

Gly Cys  Gln Ile Pro Pro Val  Pro Gln Ser Ser Phe  Tyr Leu Leu
    9815                 9820                 9825

Ser Asp  Val Gln Lys Ala Arg  Pro Gly Gly Leu Arg  Pro Arg Leu
    9830                 9835                 9840

Pro Leu  Arg Cys Arg Gln Arg  Thr Asp Arg Ala Leu  His Gln Pro
    9845                 9850                 9855
```

```
Pro Leu  Arg Leu Phe Arg Trp  Ile Pro Arg Glu Ala  Pro Gly Gly
    9860                9865                9870

Val Val  Pro Ala Thr Gly Pro  Arg His His Gln Glu  Arg Gly Asn
    9875                9880                9885

His Pro  Gln Ala Gly Arg Gly  Gly Gly Pro Arg Leu  Val Gly Lys
    9890                9895                9900

Thr His  Leu Gln His Gly His  Gln Gly Arg Arg Pro  Ser Gln Tyr
    9905                9910                9915

Phe Lys  Gln His His Phe Pro  Asn Cys Cys Pro Phe  Leu Gln Gln
    9920                9925                9930

Gln Trp  Asn Phe Lys Pro Gln  Cys Leu His Thr Ile  Ser Ser Ile
    9935                9940                9945

Ser His  Ile His Phe Arg His  Lys Ser Trp Lys Arg  Ser Ser Asp
    9950                9955                9960

Phe Lys  Val Val Asp Cys Thr  Thr Asn Ser Ser Ser  Tyr Ile Gln
    9965                9970                9975

Leu Lys  His His Ser Lys Asn  Arg Gln Arg Ala Ile  Tyr Leu Gln
    9980                9985                9990

Trp Lys  Gln Arg Thr Gly Tyr   Lys Pro Lys Lys Arg   Thr Ser Phe
    9995                10000                10005

Arg Cys   Tyr Cys Asn Ile Tyr   Trp Lys Trp Leu Arg   Leu Trp Ile
    10010                10015                10020

Leu Trp   Lys Asn Lys Thr Arg   Asn Tyr Gln Asn Trp   Ser Arg Ile
    10025                10030                10035

Lys Phe   Cys Gln Ser Asn Ser   Cys Gln Thr Arg His   Arg Phe Lys
    10040                10045                10050
```

```
Phe Leu   Arg Trp Cys Leu Asp   Ser Trp Lys Gln Thr   Gly Gln Ala
    10055                 10060                 10065

Asn Thr   Leu Asp Tyr Pro Pro   Lys Pro Leu Ser Ile   Thr Phe Arg
    10070                 10075                 10080

Gln Arg   Cys Gln Ile Tyr Ser   Leu Ser Tyr Lys Met   Arg Ser Asn
    10085                 10090                 10095

Thr Arg   His Cys Gly Ser Gly   Gly Cys Tyr Cys Arg   Ile Ser Thr
    10100                 10105                 10110

Lys Ser   Asn His Ser Gln Lys   Arg His Ser Phe Pro   Ile Phe Arg
    10115                 10120                 10125

Trp Cys   Thr His Val Lys Leu   Ile Asn Gly Arg Leu   Leu Glu Leu
    10130                 10135                 10140

Gly Gly   Thr Asp His Ser Lys   Cys Ser Leu Tyr Lys   Cys Cys Gly
    10145                 10150                 10155

Ile His   Ala Lys Tyr Arg Cys   Ile Ser Lys Asn Pro   Lys Asn Thr
    10160                 10165                 10170

Lys His   Ser Gln Ser Gly Ile   Phe Asn Trp Arg Asn   Tyr Tyr Ala
    10175                 10180                 10185

Asn Asp   Thr Asn His Asn Phe   Gln Trp His Lys Arg   His Asn Pro
    10190                 10195                 10200

Ser His   Leu Leu Tyr Asp Phe   Tyr Met Ala Val Asp   Trp Arg Leu
    10205                 10210                 10215

Gly Gln   Lys Tyr Tyr Leu Cys   Tyr Gln Leu Ile Leu   Phe Phe Leu
    10220                 10225                 10230

His Arg   Pro Gly Ile Ile Pro   Pro Ser Lys Pro Thr   Pro Phe Pro
    10235                 10240                 10245
```

```
Thr Thr   Phe Val Tyr Met Glu   Thr Leu Lys Gln Lys   Asn Lys Val
    10250                 10255                 10260

Gln Val   Phe Tyr Ile Asn Ser   Phe Thr Gly Leu Glu   Gln Leu Phe
    10265                 10270                 10275

Phe Leu   His Pro Pro Arg Thr   Trp Asn Thr Pro Pro   Ser Pro Pro
    10280                 10285                 10290

Ala Gln   Pro Thr Ser Glu Cys   His Trp Trp Thr Cys   Phe Trp Ser
    10295                 10300                 10305

Pro Arg   Ser Thr Gln Phe Gln   Ser Glu Pro Val Ser   Asp Arg Ser
    10310                 10315                 10320

Gly Arg   Asn Pro Pro Gly Thr   Pro Ala Ser Ala Pro   His Ser Ser
    10325                 10330                 10335

Thr Ala   Glu Asp Cys Pro Arg   Trp Ser Gly Ser Arg   Leu Ser Gly
    10340                 10345                 10350

Arg Ser   Arg Arg Ala Ala Val   Gly Ile Ile Val Arg   Glu Arg Asp
    10355                 10360                 10365

Arg Pro   Val Val Ser His Gln   Ala Pro Gln Gln Ser   Leu Pro Pro
    10370                 10375                 10380

Pro Leu   Arg Gln Ala Ala Ala   Gln Gly Val Arg Val   Gln Gly Leu
    10385                 10390                 10395

Pro Gln   His Asp Ala His Gly   Pro Gln His Gln Ser   Ser Gly Ala
    10400                 10405                 10410

Ala Gly   Ala Ala Ala His Ala   Asn Leu Ala Gln Val   Thr Ala Val
    10415                 10420                 10425

Arg Ala   Thr Gln Asp His Gln   Val Val Gln Gln Ser   Ile Val Gln
    10430                 10435                 10440
```

```
His Ala   Pro Ala Glu Thr His   Arg Gly Lys Asp Ala   Thr His Val
    10445                10450                10455

Ala Val   Val Pro Asp Pro Gln   Val Asn Gln Val Ala   Leu Pro Pro
    10460                10465                10470

Glu Asp   Ala Ala His Val His   Asp Leu Leu Gly His   Val Ala Val
    10475                10480                10485

His His   Leu Pro Val Pro His   His Pro Leu Val Glu   His Ala Ala
    10490                10495                10500

Pro Asp   Asp Pro Ala Glu Pro   Gln Gly Gln His Arg   Pro Ala Arg
    10505                10510                10515

His Ala   Ala Lys Arg Pro Arg   Ile Pro Ala Met Thr   Met Glu Asp
    10520                10525                10530

Pro Pro   Leu Val Pro Val Asp   His Leu Gly Ala Glu   Gln Val Tyr
    10535                10540                10545

Val Gly   Thr Ala Gln Ala Tyr   Ala His Ala Ser Leu   Gln His Ser
    10550                10555                10560

Gln Leu   Leu Gly Gly Gln Asn   His Ile Pro Gly His   Gly Glu Leu
    10565                10570                10575

Leu Gln   Asp Ser Glu Pro Arg   Arg Thr Gly Gln Ser   Ser His Ile
    10580                10585                10590

Thr Tyr   Ile Val His Gly Gln   Gly Ile Ala Ile Arg   Gln His Arg
    10595                10600                10605

Val Ile   Leu His Gln Arg Ser   Ala Gly Leu Gly Leu   Leu Thr Ala
    10610                10615                10620

Trp Gly   Gly Arg Pro Ile Arg   Val Met Ala Gly Arg   Gly Ser Cys
    10625                10630                10635
```

```
Ser Arg   Pro Cys His Asp Ala   Val Ala Phe Gly His   Phe Arg Thr
    10640                10645                10650

Cys Cys   Ser Arg Thr Trp Ser   Gly Arg Cys Thr Pro   Ile Ala Gly
    10655                10660                10665

Gly Gly   Leu Gly Ala Trp Asn   Ala Arg Cys Ser Cys   Lys Thr Ala
    10670                10675                10680

Thr Leu   Ser Asp Arg Ala Ala   Asp Leu Gly Pro Gln   Glu Arg Ser
    10685                10690                10695

His His   Ala Leu Ser His Arg   Pro Pro Trp Asn Gly   Pro Gly Pro
    10700                10705                10710

Ala Arg   Cys Asn Phe Val Gly   Phe Arg Arg Arg Gly   Arg Glu Glu
    10715                10720                10725

Gln Glu   Glu Pro Leu Thr Phe   Asn Pro Asn Gly Leu   Gly Ala Leu
    10730                10735                10740

Gln Asn   Glu Gly His Gly Asp   Gly Thr Ser Arg Pro   Arg Cys Val
    10745                10750                10755

Gly Gly   Lys Gln Pro Gly Gln   Arg Tyr Gly Ser Arg   Asp Val Pro
    10760                10765                10770

Arg Trp   Leu Pro Ala Lys Pro   Pro Arg Ala His Pro   Glu Thr Arg
    10775                10780                10785

Gln Arg   Lys Arg Glu Gly Ser   Leu Ile Pro Gln Pro   Ser Cys Tyr
    10790                10795                10800

Thr Pro   Ala Pro Ser Pro Asp   Asn Phe His Phe Ser   Ser Leu Glu
    10805                10810                10815

Phe Glu   Leu Val Pro Glu Val   Asn Pro Ser Gln Pro   Lys Ala Arg
    10820                10825                10830
```

```
Ala Glu   His Pro Pro Pro Ala   Phe Leu Ser Thr Pro   Ser Phe Gln
    10835                10840                10845

Asp Ile   Leu Leu Leu Val His   Leu Gln Gln Ile Asp   Lys Arg Asn
    10850                10855                10860

Ile Lys   Ile Ser Ala Ala Ile   Pro Glu Leu Leu Pro   Gln Gln Leu
    10865                10870                10875

Val Leu   Phe His Ile Val Ser   Glu Ile Phe Ser His   Arg Thr Pro
    10880                10885                10890

Arg Asn   Lys Arg Arg Ala Ser   His Ile Thr Asp Lys   Pro Lys Ser
    10895                10900                10905

Pro Pro   Val Ser Ile Ala Lys   Cys Lys Ile Glu Ile   Ser Met Leu
    10910                10915                10920

Ala Arg   Pro Gly Asp Ile Phe   Gln Ile Thr Gly Gln   Lys Ile Gly
    10925                10930                10935

Ala Ile   Phe Lys Lys Ile Asn   Lys Arg Lys Ile Phe   Gln Val His
    10940                10945                10950

Val Gly   Leu Gly Asn Asn Asp   Gly Val Ser Ala Arg   Gly Ala Phe
    10955                10960                10965

Gln His   Gly Leu Ala Asp Leu   Lys Asn Lys Lys Asn   Ile Lys Pro
    10970                10975                10980

Cys Pro   Gly Glu Gln Val Gly   Lys Ser Phe Ser Pro   Ala Pro Gly
    10985                10990                10995

Arg Pro   Arg Gly Leu Arg Arg   Asp Pro Arg Lys Asn   Cys Arg Tyr
    11000                11005                11010

Asp Lys   Pro Ser Gln Arg Asp   Val Pro Gly Gly Arg   Arg Glu Phe
    11015                11020                11025
```

```
Glu Lys   Lys His Thr Pro Pro   Glu His Trp Ser Pro   Val Lys Lys
    11030                11035                11040

Ser Gly   Arg Gly Ser Asn Glu   Ala Leu Gln Arg Ser   Leu Ser Ser
    11045                11050                11055

Pro Ala   Lys Arg Cys His Ala   Asp Glu Ala Gln Asn   Phe Gln Val
    11060                11065                11070

Arg Lys   Lys Cys Asn Tyr Ser   Pro Pro Ala Gln Ala   Ala Lys Leu
    11075                11080                11085

Pro Ile   Pro Pro Asp Thr His   Thr Lys Pro Gln Arg   Pro Leu Thr
    11090                11095                11100

Glu Arg   Gln Gln Gln Arg His   Thr Thr Gly Ala Arg   Val Arg Glu
    11105                11110                11115

Lys Thr   Glu Leu Pro Val Arg   Pro Leu Ser Ala Gln   Tyr Ile Ala
    11120                11125                11130

Pro Asp   Leu His Arg Lys Gly   Gln Ser Leu Lys Ile   Pro Ala Lys
    11135                11140                11145

Ser His   Thr Pro Ser Thr Arg   Pro Glu Thr Gly Asp   Thr Leu Arg
    11150                11155                11160

Lys Ile   Arg Ala Leu Pro Gln   Thr Ala Lys Leu Pro   Ser Phe Pro
    11165                11170                11175

Gly Ser   His Ala Thr Ser Ser   Lys His Asp Phe Gln   Ile Pro Ser
    11180                11185                11190

Thr Val   Lys Asn Ile Thr Arg   Pro Ala Pro Asn Gly   Arg Arg Ser
    11195                11200                11205

Arg Ser   Gln Ser Pro Ser Ser   Leu Pro Lys Phe Lys   Gln Leu Ile
    11210                11215                11220
```

```
Cys Ile   Leu Thr Arg Thr Lys   Ser Leu Arg Tyr Ile   Ile Asp Asp
    11225                11230                11235


<210>  14
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<212>  PRT
<213>  Artificial Sequence

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<223>  Artificially Synthesized

<400>  14

His His Gln Tyr Thr Ser Asn Phe Trp Cys Ala Leu Ile Cys Lys Ala
1               5                   10                  15


Val Ile Trp Gly Gly Arg Lys Val Ile Gly Cys Gly Ser Gly Asp Arg
            20                  25                  30


Gly Arg Gly Gly Arg Phe Asp Asp Val Ala Met Arg Arg Ser Arg Phe
        35                  40                  45


Ala Ser Ser Arg Gly Lys Ser Asp Val Lys Arg Gly Val Val Thr Arg
    50                  55                  60


Lys Tyr Ser Ile Phe Pro Arg Ser Leu Thr Gly Asn Glu Val Phe Leu
65                  70                  75                  80


Gly Gly Cys Lys Lys Arg Ala Ile Phe Ala Arg Lys Leu Asn Glu Glu
                85                  90                  95


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


Gly Arg Val Asp Phe Asp Arg Leu Arg Gly Gly Phe Asp Tyr Arg Ile
        115                 120                 125


Phe His Leu Asn Phe Arg Val Arg Cys Gln Ser Pro Val Phe Leu Arg
    130                 135                 140
```

```
Thr Ile Ser Phe Pro Arg Lys Cys His Leu Thr Val Thr Ile Thr Val
145                 150                 155                 160


Leu Arg Arg Lys Leu Arg Ser Pro Asp Pro Leu Trp Cys Thr Leu Ser
                165                 170                 175


Thr Ile Cys Ser Asp Ala Ala Leu Ser Gln Tyr Leu Leu Pro Ala Cys
            180                 185                 190


Val Leu Glu Val Ala Glu Cys Ala Ser Lys Ile Ala Thr Thr Arg Gln
        195                 200                 205


Gly Leu Thr Asp Asn Cys Met Lys Asn Leu Leu Arg Val Arg Arg Phe
    210                 215                 220


Ala Leu Leu Arg Asp Val Arg Ala Arg Tyr Thr Arg His Leu Leu Thr
225                 230                 235                 240


Ser Met Pro Ser Thr Pro Pro Ile Asp Val Asn Asp Gly Lys Trp Pro
                245                 250                 255


Ala Trp His Tyr Ala Gln Tyr Met Thr Leu Trp Asp Phe Pro Thr Trp
            260                 265                 270


Gln Tyr Ile Tyr Val Leu Val Ile Ala Ile Thr Met Val Met Arg Phe
        275                 280                 285


Trp Gln Tyr Ile Asn Gly Arg Gly Arg Phe Asp Ser Arg Gly Phe Pro
    290                 295                 300


Ser Leu His Pro Ile Asp Val Asn Gly Ser Leu Phe Trp His Gln Asn
305                 310                 315                 320


Gln Arg Asp Phe Pro Lys Cys Arg Asn Asn Ser Ala Pro Leu Thr Gln
                325                 330                 335


Met Gly Gly Arg Arg Val Arg Trp Glu Val Tyr Ile Ser Arg Ala Arg
            340                 345                 350
```

```
Leu Val Asn Arg Gln Ile Thr Arg Ser Phe Ile Ala Val Val Tyr His
        355                 360                 365

Ser Ile Ala Asn Ala Val Ser Ala Ser Asp Thr Thr Val Ser Asn Leu
    370                 375                 380

Arg Leu Glu Phe Asp Ala Thr Met Arg Val Arg Gly Ile Pro Arg Asn
385                 390                 395                 400

Trp Pro Gln Trp Trp Ile Trp Gly Ile Leu Gly Phe Trp Met Ile Ile
                405                 410                 415

Ile Cys Arg Val Val Gly Asn Leu Asp Leu Trp Val Thr Val Tyr Tyr
            420                 425                 430

Gly Val Pro Val Trp Lys Glu Ala Lys Thr Thr Leu Phe Cys Ala Ser
        435                 440                 445

Asp Ala Lys Ala Tyr Asp Lys Glu Val His Asn Val Trp Ala Thr His
    450                 455                 460

Ala Cys Val Pro Thr Asp Pro Asn Pro Gln Glu Ile Val Leu Glu Asn
465                 470                 475                 480

Val Thr Glu Asn Phe Asn Met Trp Lys Asn Asp Met Val Asp Gln Met
                485                 490                 495

His Glu Asp Ile Ile Ser Leu Trp Asp Gln Ser Leu Lys Pro Cys Val
            500                 505                 510

Lys Leu Thr Pro Leu Cys Val Thr Leu Asn Cys Lys Asn Val Asn Ile
        515                 520                 525

Ser Ala Asn Ala Asn Ala Thr Ala Thr Leu Asn Ser Ser Met Asn Gly
    530                 535                 540

Glu Ile Lys Asn Cys Ser Phe Asn Thr Thr Thr Glu Leu Arg Asp Lys
545                 550                 555                 560
```

```
Lys Gln Lys Val Tyr Ala Leu Phe Tyr Lys Pro Asp Val Val Pro Leu
                565                 570                 575

Asn Gly Gly Glu His Asn Glu Thr Gly Glu Tyr Ile Leu Ile Asn Cys
            580                 585                 590

Asn Ser Ser Thr Ile Thr Gln Ala Cys Pro Lys Val Ser Phe Asp Pro
        595                 600                 605

Ile Pro Ile His Tyr Cys Ala Pro Ala Gly Tyr Ala Ile Leu Lys Cys
    610                 615                 620

Asn Asn Lys Thr Phe Asn Gly Thr Gly Pro Cys Asn Asn Val Ser Thr
625                 630                 635                 640

Val Gln Cys Thr His Gly Ile Lys Pro Val Val Ser Thr Gln Leu Leu
                645                 650                 655

Leu Asn Gly Ser Leu Ala Glu Glu Glu Ile Ile Val Arg Ser Glu Asn
            660                 665                 670

Leu Thr Asn Asn Ile Lys Thr Ile Ile Val His Leu Asn Lys Ser Val
        675                 680                 685

Glu Ile Lys Cys Thr Arg Pro Asn Asn Asn Thr Arg Lys Ser Val Arg
    690                 695                 700

Ile Gly Pro Gly Gln Thr Phe Tyr Ala Thr Gly Glu Ile Ile Gly Asp
705                 710                 715                 720

Ile Arg Glu Ala His Cys Asn Ile Ser Arg Glu Thr Trp Asn Ser Thr
                725                 730                 735

Leu Ile Gln Val Lys Glu Lys Leu Arg Glu His Tyr Asn Lys Thr Ile
            740                 745                 750

Lys Phe Glu Pro Ser Ser Gly Gly Asp Leu Glu Val Thr Thr His Ser
        755                 760                 765
```

```
Phe Asn Cys Arg Gly Glu Phe Phe Tyr Cys Asp Thr Thr Lys Leu Phe
    770                 775                 780

Asn Glu Thr Lys Leu Phe Asn Glu Ser Glu Tyr Val Asp Asn Lys Thr
785                 790                 795                 800

Ile Ile Leu Pro Cys Arg Ile Lys Gln Ile Ile Asn Met Trp Gln Glu
                805                 810                 815

Val Gly Arg Ala Met Tyr Ala Pro Pro Ile Glu Gly Asn Ile Thr Cys
            820                 825                 830

Lys Ser Asn Ile Thr Gly Leu Leu Leu Thr Trp Asp Gly Gly Glu Asn
        835                 840                 845

Ser Thr Glu Gly Val Phe Arg Pro Gly Gly Gly Asn Met Lys Asp Asn
    850                 855                 860

Trp Arg Ser Glu Leu Tyr Lys Tyr Lys Val Val Glu Ile Lys Pro Leu
865                 870                 875                 880

Gly Val Ala Pro Thr Lys Ser Lys Arg Lys Val Val Gly Arg Glu Lys
                885                 890                 895

Arg Ala Val Gly Leu Gly Ala Val Leu Leu Gly Phe Leu Gly Ala Ala
            900                 905                 910

Gly Ser Thr Met Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg
        915                 920                 925

Gln Leu Leu Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala
    930                 935                 940

Ile Glu Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys
945                 950                 955                 960

Gln Leu Gln Thr Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln
                965                 970                 975
```

```
Gln Leu Leu Gly Leu Trp Gly Cys Ser Gly Lys Leu Ile Cys Ala Thr
            980                 985                 990


Ala Val Pro Trp Asn Ser Ser Trp  Ser Asn Lys Ser Leu  Gly Asp Ile
        995                 1000                1005


Trp Asp  Asn Met Thr Trp Met  Gln Trp Asp Arg Glu  Ile Ser Asn
    1010                1015                1020


Tyr Thr  Asn Thr Ile Phe Arg  Leu Leu Glu Asp Ser  Gln Asn Gln
    1025                1030                1035


Gln Glu  Lys Asn Glu Lys Asp  Leu Leu Ala Leu Asp  Ser Trp Lys
    1040                1045                1050


Asn Leu  Trp Asn Trp Phe Asp  Ile Thr Asn Trp Leu  Trp Tyr Ile
    1055                1060                1065


Lys Ile  Phe Ile Met Ile Val  Gly Gly Leu Ile Gly  Leu Arg Ile
    1070                1075                1080


Ile Phe  Gly Val Leu Ala Ile  Val Lys Arg Val Arg  Gln Gly Tyr
    1085                1090                1095


Ser Pro  Leu Ser Phe Gln Thr  Leu Ile Pro Asn Pro  Arg Gly Pro
    1100                1105                1110


Asp Arg  Leu Gly Arg Ile Glu  Glu Glu Gly Gly Glu  Gln Asp Lys
    1115                1120                1125


Asp Arg  Ser Ile Arg Leu Val  Ser Gly Phe Leu Ala  Leu Ala Trp
    1130                1135                1140


Asp Asp  Leu Arg Ser Leu Cys  Leu Phe Ser Tyr His  Gln Leu Arg
    1145                1150                1155


Asp Phe  Ile Leu Thr Ala Ala  Arg Ala Ala Glu Leu  Leu Gly Arg
    1160                1165                1170
```

```
Ser Ser  Leu Arg Gly Leu Gln  Arg Gly Trp Glu Val  Leu Lys Tyr
    1175                1180                1185


Leu Gly  Asn Leu Val Gln Tyr  Trp Gly Leu Glu Leu  Lys Arg Ser
    1190                1195                1200


Ala Ile  Asn Leu Phe Asp Thr  Ile Ala Ile Ala Val  Ala Glu Gly
    1205                1210                1215


Thr Asp  Arg Ile Ile Glu Val  Ile Gln Arg Ile Cys  Arg Ala Ile
    1220                1225                1230


Arg Tyr  Ile Pro Thr Arg Ile  Arg Gln Gly Phe Glu  Ala Ala Leu
    1235                1240                1245


Leu Gly  Thr Ser Arg Val Asp  Pro Gly Gly Gln Thr  Ala Asp Gln
    1250                1255                1260


Pro Arg  Leu Cys Leu Leu Val  Ala Ser His Leu Leu  Phe Ala Pro
    1265                1270                1275


Pro Pro  Cys Leu Pro Pro Trp  Lys Val Pro Leu Pro  Leu Ser Phe
    1280                1285                1290


Pro Asn  Lys Met Arg Lys Leu  His Arg Ile Val Val  Gly Val Ile
    1295                1300                1305


Leu Phe  Trp Gly Val Gly Trp  Gly Arg Thr Ala Arg  Gly Arg Ile
    1310                1315                1320


Gly Lys  Thr Ile Ala Gly Met  Leu Gly Met Arg Trp  Ala Leu Trp
    1325                1330                1335


Leu Leu  Arg Arg Lys Glu Pro  Ala Asp Leu Gln Ile  Ile His Leu
    1340                1345                1350


Cys Arg  Val Arg Arg Lys Arg  Asn Gly Ile Met Gly  Ile Met Gly
    1355                1360                1365
```

```
Leu His  Ile Gly Gln Ile Ser  Thr Tyr Ala Gly His  Arg Ala Cys
    1370                1375                1380


Gly Leu  Ala Pro Pro Gln Asp  Met Ala Arg Val Arg  Ala Gln Arg
    1385                1390                1395


His Asp  Pro Leu Gln Cys Ala  Pro Gly Leu Pro Pro  Arg His Val
    1400                1405                1410


His Ala  Leu Pro Val Gln His  Ala Ile Cys Glu Gly  Ala Ala Gly
    1415                1420                1425


Ala Arg  Cys His Val Gln Ser  Glu Pro Asp Gly Gly  Val His Glu
    1430                1435                1440


Cys Gly  Ala Val Glu Asn Ser  Glu Ile Ile Gln Asp  Gln Val Pro
    1445                1450                1455


Gly Leu  Arg Met Arg Arg Gln  Ala Arg Gln Ala Ser  Ala Arg Val
    1460                1465                1470


Cys Gly  Gly Asp Gly Gly Pro  Ala Thr Arg Ser Phe  Gly Val Val
    1475                1480                1485


Leu Gln  Arg Asp Gly Val Arg  Leu Gln Arg Gly Arg  Ile Leu Glu
    1490                1495                1500


Val Val  Phe Gly Ala Gly Cys  Glu Pro Ala Gly Ala  Glu Leu Lys
    1505                1510                1515


Ser Val  Val Phe Cys Val Leu  Gln Gln His Glu Arg  Lys Arg Leu
    1520                1525                1530


Leu Gly  Arg Gly Ile Gln Pro  Leu Ser Asp Gly Ala  Ser Pro Leu
    1535                1540                1545


Leu Gly  Gly Ser Ala Ser Glu  Cys Asp Gly Ile His  Gly Gly Arg
    1550                1555                1560
```

```
Pro Ala  Arg Ala Ala Arg Glu  Leu Phe Asn Pro Asp  Leu Arg Asp
    1565                1570                1575


Pro Glu  Leu Leu Val Arg Gly  Arg Ser Cys Arg Arg  Ser Cys Cys
    1580                1585                1590


Phe Arg  Arg Gln Arg Arg Ala  Arg Asn Gly Pro Gly  Arg Arg Leu
    1595                1600                1605


Leu Gln  Leu Ser Gly Gly Gln  Leu Glu Phe His Gln  Ser Arg Gln
    1610                1615                1620


Pro Glu  Arg Gly Glu Ala Ala  Ala Ala Asp Gly Pro  Ala Arg Gly
    1625                1630                1635


Pro Asp  Pro Ala Pro Gly Arg  Ala Asp Pro Ala Gly  Gly Ser Ala
    1640                1645                1650


Ala Gly  Gly Asp Ala Gly Arg  Gly Cys His Gly Glu  Asn Gln Ile
    1655                1660                1665


Lys Asn  Glu Ser Ile Asn Lys  Arg Arg Arg Leu Leu  Ile Leu Thr
    1670                1675                1680


Gln Ser  Leu Glu Ser Leu Phe  Asp Phe Ser Arg Ala  Val Gly Pro
    1685                1690                1695


Gly Pro  Pro Val Ser Ile Ile  Glu His Pro Val Asp  Leu Phe Gln
    1700                1705                1710


Asp Pro  Val Glu Val Gly Leu  Asp Val Glu Val His  Gly His Glu
    1715                1720                1725


Pro Val  Pro Gly Val Glu Val  Ala Pro Leu Gln Gly  Leu Val Leu
    1730                1735                1740


Gly Asp  Gly Val Val Asn His  Pro Val Ile Ala Gly  Ala Gln Gly
    1745                1750                1755
```

```
Val Val  Leu His Asp Val Leu  Glu Glu Glu Thr Asp  Gly His Gly
    1760                1765                1770

Gln Pro  Leu Gly Val Gly Val  Asp Glu Pro Val Glu  Leu Gly Gly
    1775                1780                1785

Met His  Ala Gly Gly Asp Glu  Met His Leu Gly Leu  Asp Leu Glu
    1790                1795                1800

Ile Gly  Asp Val Pro Ala Gln  Ile Pro Pro Gly Val  His Val Val
    1805                1810                1815

Gln Asp  His Gln His Gly Val  Ser Gly Ala Leu Gly  Glu Phe Val
    1820                1825                1830

Met Gln  Leu Gly Arg Glu Gly  Val Lys Glu Phe Gly  Asp Ala Leu
    1835                1840                1845

Val Thr  Ala Gln Val Phe His  Ala Leu Ile His Asp  Asp Gly Asp
    1850                1855                1860

Gly Pro  Val Gly Gly Gly Leu  Gly Lys Asp Val Ser  Gly Val Gly
    1865                1870                1875

His Ile  Val Val Val Val Leu  Gly Glu Leu Val Ile  Gly His Phe
    1880                1885                1890

Asn Glu  Phe Gly Ala Glu Gly  Ala Arg Leu Gly Asp  Glu Gly Ala
    1895                1900                1905

Leu Asp  Pro Gly Gly Val Val  Ala Leu Ala Asp Leu  His Leu Pro
    1910                1915                1920

Gly Leu  Glu Leu Gly Gly Gly  Asp His Val His Leu  Arg Gly Asp
    1925                1930                1935

Glu Lys  Asn Gly Phe Arg Gly  Gly Gly Asp Glu Leu  Gly Arg Lys
    1940                1945                1950
```

```
Gln Val  Pro Glu Gln Leu Gly  Leu Ala Ala Thr Gly  Gly Ala Val
    1955                1960                1965


Asp Asp  Pro Asp Asp Arg Leu  Gln Val Val Val Glu  Gly Glu Thr
    1970                1975                1980


Ala Ala  Val Leu Ala Glu Glu  Gly Gly His Leu Val  His His Leu
    1985                1990                1995


Ala His  Met His Val Leu Ala  His Glu Phe Arg Gln  Glu Ala Leu
    2000                2005                2010


Ala Pro  Gln Arg Glu Glu Leu  Leu Gln Arg Gly Glu  Val Phe Gln
    2015                2020                2025


Arg Leu  Glu Ser Val Gly His  Gly His Phe Gly Glu  Gly Leu Leu
    2030                2035                2040


Gln Glu  Phe Gln Thr Val Pro  Glu Leu Gly Asp Val  Leu Gly Ile
    2045                2050                2055


Ser Ile  Gln Gln Thr Ser Ser  Phe Arg Gly Leu Gly  Arg Leu Arg
    2060                2065                2070


Glu Gly  Thr Arg Arg Trp Ala  Ser Ser Glu Ala Arg  Val Arg Ser
    2075                2080                2085


Phe Gln  Gly Arg Arg Val Arg  Val Ser Val Val Ser  Val Thr Val
    2090                2095                2100


Lys Gly  Cys Ala Pro Gly Trp  Ala Leu Ala Arg Val  Arg Phe Arg
    2105                2110                2115


Leu Ile  Arg Leu Val Glu Asn  Arg Ser Arg Ser Ala  Pro Cys Ala
    2120                2125                2130


Ser Ala  Arg Gln Leu Ser Met  Ser Ser Leu Ser Ala  Ser Ala Ala
    2135                2140                2145
```

```
Trp Pro  Leu Ala Arg Ser Leu  Pro Leu Glu Val Cys  Pro Gln Thr
    2150                2155                2160


Gly Gln  Arg Arg Asp Leu Arg  Ala Ser Leu Gly Ala  Arg Lys Thr
    2165                2170                2175


Asp Ser  Gly Ala Ala Ser Ala  Pro Gln Leu Ala Gln  Thr Val Ser
    2180                2185                2190


His Ser  Thr Ser Gln Val Arg  Ser Gly Arg Leu Gly  Ser Lys Thr
    2195                2200                2205


Arg Phe  Pro Pro Cys Phe Leu  Met Arg Phe Leu Pro  Leu Val Ser
    2210                2215                2220


Met Ser  Ser Cys Pro Arg Trp  Val Thr Lys Arg Leu  Ser Val Ser
    2225                2230                2235


Pro Thr  Asp Phe Met Gly Arg  Ser Ser Ser Gly Val  Pro Arg Ser
    2240                2245                2250


Ser Ser  Arg Asn Pro Ala His  Ser Glu Thr Lys Ala  Arg Val Gln
    2255                2260                2265


Ala Ser  Thr Lys Glu Ala Thr  Trp Glu Gly Arg Ser  Leu Ser Thr
    2270                2275                2280


Ser Gly  Ser Thr Phe Ser Arg  Val Cys Lys His Met  Ser Pro Ser
    2285                2290                2295


Ser Thr  Ser Arg Lys Val Ile  Gly Leu Val Ala Thr  Pro Gly Val
    2300                2305                2310


Pro Ala  Gly Gly Val Lys Gly  Ala Gly Pro Cys Ser  Ser Ser Leu
    2315                2320                2325


Ser Ser  Gly Ser Leu Ser Arg  Ser Ala Ser Cys Trp  Gly Arg Tyr
    2330                2335                2340
```

```
Ser Leu  Ser Lys Ala Gly Met  Thr Ser Ala Leu Arg  Leu Ser Val
    2345                2350                2355


Ser Arg  Asn Glu Glu Asp Leu  Ile Leu Thr Val Pro  Leu Glu Thr
    2360                2365                2370


Pro Phe  Met Ser Pro Ser Ser  Ile Trp Ser Glu Lys  Thr Ile Phe
    2375                2380                2385


Leu Leu  Ser Ser Leu Val Ala  Lys Glu Pro Arg Ala  Leu Glu Ser
    2390                2395                2400


Ser Leu  Ala Met Glu Arg Met  Val Trp Phe Phe Ser  Leu Ser Ala
    2405                2410                2415


Arg Ser  Leu Ala Ala Met Leu  Ser Cys Thr Tyr Ser  Arg Ala Thr
    2420                2425                2430


His Phe  His Ser Gly Lys Thr  Val Val Ser Ser Ser  Gly Thr Ile
    2435                2440                2445


Leu Thr  Arg Gln Pro Arg Leu  Cys Arg Val Met Arg  Ser Thr Leu
    2450                2455                2460


Val Ala  Thr Ser Pro Arg Arg  Gly Ser Leu Val Gln  Gln Arg Arg
    2465                2470                2475


Pro Pro  Leu Arg Glu Gln Lys  Gly Gly Ser Gly Ser  Ser Met Ser
    2480                2485                2490


Ser Ser  Gly Gly Ser Ala Ser  Thr Val Lys Met Pro  Gly Arg Ser
    2495                2500                2505


Ser Gly  Ser Lys Leu Met Gln  Val Pro Arg Leu Ser  Ser Ala Ala
    2510                2515                2520


Cys Gln  Ser Arg Thr Ala Ser  Ala Arg Ser Gly Leu  Arg Gly Val
    2525                2530                2535
```

```
Pro Gln  Gly Met Gly Cys Val  Ser Ala Glu Ala Tyr  Met Pro Gln
    2540                2545                2550

Met Ser  Thr Arg Gly Ser Ser  Arg Thr Pro Met Val  Gly Gln Arg
    2555                2560                2565

Pro Pro  Arg Met Leu Ala Arg  Thr Ser Tyr Ser Ser  Cys Glu Gly
    2570                2575                2580

Ala Arg  Ser Pro Val Pro Arg  Leu Glu Arg Cys Gly  Phe Ser Ala
    2585                2590                2595

Arg Thr  Ile Trp Arg Lys Met  Ala Trp Glu Leu Glu  Glu Met Val
    2600                2605                2610

Gly Leu  Trp Lys Met Leu Lys  Trp Ala Trp Gly Arg  Pro Thr Glu
    2615                2620                2625

Ser Leu  Met Lys Trp Ala Glu  Ser Cys Ser Leu Ala  Thr Ser Ser
    2630                2635                2640

Ala Val  Thr Arg Thr Ser Arg  Ala Gln Ser Arg Val  Ser Trp Met
    2645                2650                2655

Met Ser  Tyr Leu Ser Trp Pro  Phe Cys Phe His Ser  Ser Arg Leu
    2660                2665                2670

Arg Arg  Asn Ser Ser Arg Ser  Phe Gln Tyr Ser Ser  Arg Gly Asn
    2675                2680                2685

Pro Ser  Ser Ala Arg Glu Pro  Thr Met Asn Trp Leu  Thr Ala Leu
    2690                2695                2700

Ala Gln  Gln Pro Phe Ser Thr  Gly Arg Ala Ala Cys  Ala Ala Leu
    2705                2710                2715

Arg Arg  Glu Val Trp Val Arg  Ala Lys Val Ser Arg  Thr Met Thr
    2720                2725                2730
```

```
Leu Arg  Asn Trp Cys Leu Lys  Ser Arg Ser Ser Gln  Pro Pro Cys
    2735                2740                2745


Ser Gln  Ser Trp Lys Ser Val  Arg Phe Leu Ala Gly  Leu Gly Lys
    2750                2755                2760


Ala Lys  Val Thr Ser Leu Lys  Arg Ile Leu Pro Ala  Arg Gly Met
    2765                2770                2775


Lys Leu  Arg Val Met Arg Lys  Gly Trp Gly Thr Ser  Ala Arg Leu
    2780                2785                2790


Leu Met  Thr Trp Ala Ala Arg  Thr Ile Ser Ser Lys  Pro Leu Met
    2795                2800                2805


Leu Cys  Pro Thr Met Ser Ser  Thr Asn Arg Gly Arg  Pro Leu Thr
    2810                2815                2820


Trp Gly  Ser Phe Leu Ser Ser  Ser Val Ser Ser Ala  Gly Ser Leu
    2825                2830                2835


Ser Pro  Cys Cys Ser Arg Ala  Gln Ser Ala Thr Trp  Gly Leu Ala
    2840                2845                2850


Leu Arg  Lys Glu Val Gln Arg  Ser Thr Ala Arg Ala  Val Cys Lys
    2855                2860                2865


Arg Ser  Arg Tyr Arg Asn Cys  Trp Pro Thr Ala Ile  Phe Ser Gly
    2870                2875                2880


Val Thr  Gln Lys Val Arg Gly  Ser Pro Cys Gln Arg  Ser His Leu
    2885                2890                2895


Ser Trp  Arg Ala Arg Ser Trp  Ala Ser Ser Thr Ser  Gly Gly Ser
    2900                2905                2910


Pro Glu  Ser Phe Met Thr Ser  Met Lys Gly Thr Ser  Cys Leu Pro
    2915                2920                2925
```

```
Lys Asp  Pro Ile Gln Val Val  Ser Thr Ser Val Arg  Lys Ser Leu
    2930                2935                2940


Ser Val  Arg Gly Cys Glu Pro  Met Gly Lys Asn Trp  Ile Ser Cys
    2945                2950                2955


His Gln  Leu Glu Glu Trp Leu  Leu Met Trp Lys Lys  Cys Arg Arg
    2960                2965                2970


Arg Ala  Glu His Ser Cys Leu  Cys Leu Tyr Lys Arg  Pro Gln Cys
    2975                2980                2985


Ser Gln  Arg Cys Thr Gly Cys  Thr Cys Cys Thr Ser  Cys Thr Trp
    2990                2995                3000


Val Pro  Leu Ala Arg Asn Phe  Ser Gly Gln Trp Ser  Ala Gly Gly
    3005                3010                3015


Cys Ile  Ser Cys Cys Thr Thr  Ser Trp Pro Ser Ala  Trp Pro Ser
    3020                3025                3030


Ser Ala  Ser Met Val Val Met  Leu Thr Ser Pro Arg  Gly Arg Gln
    3035                3040                3045


Val Gln  Thr Ser Ala Arg Thr  Gly Arg Arg Ala Arg  Thr Arg Ala
    3050                3055                3060


Arg Arg  Pro Glu Leu Ser Arg  Val Leu Arg Arg Cys  Gly Val Arg
    3065                3070                3075


Ser Val  Gly Ser Gly Gly Ala  Arg Leu Thr Cys Arg  Ser Phe Ser
    3080                3085                3090


Arg Ala  Arg Gly Arg Ser Arg  Trp Tyr Leu Ile Ser  Thr Ala Pro
    3095                3100                3105


Leu Val  Ala Thr Ser Thr Ala  Cys Arg Val Pro Cys  Pro Trp Gly
    3110                3115                3120
```

```
Ala Thr  Thr Val Pro Arg Phe  Phe Leu Gly Ala Ala  Ser Met Ser
    3125                3130                3135


Val Arg  Ser Gly Gly Glu Asp  Ala Arg Arg Ala Ala  Gly Ala Ala
    3140                3145                3150


Arg Gly  Pro Glu Ala Gly Ala  Ala Gly Ala Arg Arg  Arg Arg Ala
    3155                3160                3165


Arg Ala  Gly Ser Gly Thr Ala  Pro Gly Glu Asp Trp  Arg Glu Arg
    3170                3175                3180


Arg Arg  Asp Gly Arg Pro Gly  Ser Asp Ala Ser Gly  Arg Pro Arg
    3185                3190                3195


Asp Pro  Val Thr Lys Arg Val  Arg Gln Asn Gln Ser  Arg Tyr Arg
    3200                3205                3210


Arg Arg  Pro Ala Ala Gly Ser  Leu Ala Arg Arg Pro  Ser Cys Pro
    3215                3220                3225


Gly Arg  Arg Ser Arg Ser Thr  Ala Arg Ser Pro Pro  Pro Glu Gly
    3230                3235                3240


Leu Arg  Gly Arg Arg Ala Arg  Arg Trp Pro Arg Gly  Arg Trp Arg
    3245                3250                3255


Cys Gly  Pro Ala Ala Arg Arg  Arg Ser Cys Arg Pro  Arg Ser Arg
    3260                3265                3270


Arg Gly  Cys Arg Pro Arg Leu  Arg Arg Gly Arg Ala  Arg Ala Pro
    3275                3280                3285


Pro Gly  Arg Gly Ala Arg Arg  Gly Ala Arg Pro Arg  Ser Cys Arg
    3290                3295                3300


Gly Ala  Gly Arg Gly Ser Ala  Trp Trp Arg Cys Ala  Arg Arg Arg
    3305                3310                3315
```

```
Ser Thr  Ser Ser Gly Gly Ala  Ala Ser Arg Arg Arg  Pro Gly Leu
    3320                 3325                 3330

Pro Ser  Val Pro Trp Pro Arg  Arg Ser Pro Arg Arg  Ser Lys Thr
    3335                 3340                 3345

Gly Ser  Cys Ala Pro Arg Arg  Ser Thr Pro Pro Pro  Glu Asp Gly
    3350                 3355                 3360

Ala Arg  Arg Trp Trp Arg Ala  Pro Arg Ala Arg Arg  Pro Arg Gly
    3365                 3370                 3375

Ala Pro  Leu Pro Ser Pro Pro  Leu Pro Pro Pro Leu  Thr Ser Leu
    3380                 3385                 3390

Leu Leu  Pro Pro Gln Glu Ala  Val Ala Gly Glu Gly  Pro Cys Val
    3395                 3400                 3405

Ala Gly  Gly Ala Arg Ala Asp  Gly Arg Ser Ala Arg  Trp Ser Pro
    3410                 3415                 3420

Arg Ala  Gly Asp Ala Trp Ser  Arg Arg Arg Ala Arg  Pro Arg Gly
    3425                 3430                 3435

Ala Ala  Ala Arg Arg Arg Arg  Ala Ser Pro Gly Gly  Arg Arg Gly
    3440                 3445                 3450

Gly Leu  Arg Trp Ala Gly Arg  Gly Arg Arg Cys Ile  Leu Ser Ile
    3455                 3460                 3465

Asp Pro  Gly Leu Arg Ala Arg  Thr Ala Ser Arg Asp  Pro Arg Asp
    3470                 3475                 3480

Pro Lys  Thr Ala Glu Arg Arg  Leu Arg Ala Ser Arg  Ser Arg Lys
    3485                 3490                 3495

Val Gly  Ala Arg Phe Leu Val  Leu Arg Val Phe Gly  Arg Glu Ala
    3500                 3505                 3510
```

```
Gly Gly  Arg Cys Cys Trp Ser  Ser Arg Arg Ser Asp  Gly Gly Trp
    3515                 3520                 3525


Trp Arg  Gly Ala Pro Gly Pro  Trp Ala Arg Leu Ala  Gly Cys Ala
    3530                 3535                 3540


Asp Gly  Arg Pro Cys Pro Arg  Arg Gly Pro Asp Thr  Trp Arg Gly
    3545                 3550                 3555


Pro Cys  Ser Ser Pro Ala Ala  Ala Pro Arg Ala Pro  Pro Pro Arg
    3560                 3565                 3570


Pro Arg  Gly Arg Ala Cys Ala  Ala Arg Thr Arg Ala  Ala Ala Gly
    3575                 3580                 3585


Arg Ala  Pro Gly Arg Arg Arg  Arg Ala Arg Gly Trp  Pro Ala Gly
    3590                 3595                 3600


Ser Gly  Gly Trp Ser Gly Ser  Arg Arg Ser Arg Arg  Ser Gly Gly
    3605                 3610                 3615


Arg Leu  Arg Cys Trp Cys Arg  Ser Ser Trp Pro Arg  Thr Ser Arg
    3620                 3625                 3630


Ser Gly  Gly Arg Val Ala Arg  Ala Arg Gly Thr Gly  Ala Ser Arg
    3635                 3640                 3645


Arg Ala  Cys Arg Arg Cys Ser  Arg Cys Arg Arg Ala  Arg Gly Thr
    3650                 3655                 3660


Gly Ile  Arg Arg Gly Ser Ala  Ala Ala Ala Gly Gly  Arg Ala Ala
    3665                 3670                 3675


Ile Ala  Arg Trp Arg Gly Arg  Arg Ala Arg Gly Pro  Arg Ala Gly
    3680                 3685                 3690


Gly Gly  Ser Arg Arg Cys Thr  Trp Thr Ser Arg Cys  Arg Arg Arg
    3695                 3700                 3705
```

```
Trp Trp  Arg Arg Ala Gly Thr  Arg Gly Arg Gly Ser  Arg Cys Cys
    3710                 3715                 3720


Ala Ala  Ala Gly Ser Ser Ser  Trp Trp Pro Arg Ser  Gly Pro Gly
    3725                 3730                 3735


Ala Arg  Ser Arg Gly Cys Ser  Arg His Thr Gly Lys  Asn Glu Ser
    3740                 3745                 3750


Gly Gln  Arg Leu Asp Ser Val  Ala Trp Arg Leu Ser  Glu Arg Val
    3755                 3760                 3765


Gly Leu  Arg Val Tyr Pro Gly  Ser Asn Leu Glu Ser  Gly Trp Ser
    3770                 3775                 3780


Arg Ser  Arg Gly Thr Gly Thr  Pro Val Ser Thr Gln  Ala Cys Arg
    3785                 3790                 3795


Asn Leu  Gln Asp Thr Glu Ala  Gly Arg Phe Leu Ala  Leu Val Ala
    3800                 3805                 3810


Gly His  Glu Lys Leu Val Ser  Ala Glu Ser Gly Arg  Pro Arg Trp
    3815                 3820                 3825


Leu Ala  Ala Val Val Trp Arg  Lys Asn Arg Gln Gly  Cys Val Ala
    3830                 3835                 3840


Val Cys  Pro Gly Ser Ser Leu  Ser Ala Arg Arg Arg  Pro Asp Ser
    3845                 3850                 3855


Ala Ala  Asn Val Gly Val Ala  Ala Pro Ser Phe Pro  Arg Pro Leu
    3860                 3865                 3870


Ser Gln  Pro Thr Ser Pro Val  Thr Glu Arg Ala Pro  Leu Phe Phe
    3875                 3880                 3885


Ser Cys  Val Phe Ala Arg Cys  Ile Pro Tyr Cys Gly  Arg Cys Ala
    3890                 3895                 3900
```

```
Pro Thr  Leu His His Asn Arg  Pro Tyr Arg Ser Ser  Ser Asn Ser
    3905                3910                3915


Arg Arg  Phe Cys Pro Arg Pro  Ser Ser Ser Gln Pro  Leu Pro Arg
    3920                3925                3930


Arg Pro  Pro Ala Glu Pro Ala  Phe Ser Met Thr Trp  Pro Trp Lys
    3935                3940                3945


Arg Ala  Arg Gly Trp Arg Gly  Trp Gly Arg Arg Arg  Arg Ser Gly
    3950                3955                3960


Thr Arg  Ala Cys Arg Lys Gly  Thr Leu Ala Arg Pro  Thr Cys Pro
    3965                3970                3975


Ser Arg  Thr Cys Ser Glu Thr  Gly Ala Ala Arg Ser  Pro Arg Arg
    3980                3985                3990


Cys Ala  Pro Pro Ala Ser Thr  Arg Gly Gly Ser Cys  Gly Ala Ala
    3995                4000                4005


Trp Thr  Glu Ser Gly Cys Gly  Thr Arg Ile Ser Arg  Arg Thr Ser
    4010                4015                4020


Arg Gly  Ser Ala Pro Arg Ala  Arg Thr Trp Pro Arg  Pro Thr Trp
    4025                4030                4035


Ser Arg  Arg Thr Ser Arg Pro  Arg Arg Arg Ala Thr  Ser Lys Asn
    4040                4045                4050


Pro Ser  Thr Thr Thr Cys Ala  Arg Ser Arg Ala Arg  Arg Pro Trp
    4055                4060                4065


Ala Cys  Thr Cys Gly Thr Cys  Trp Arg Pro Ser Cys  Arg Thr Pro
    4070                4075                4080


Arg Ala  Ser Arg Arg Arg Ser  Cys Phe Trp Trp Cys  Ser Thr Val
    4085                4090                4095
```

```
Gly Thr  Thr Arg Arg Ser Gly  Arg Arg Cys Ile Ser  Pro Ser Pro
    4100                4105                4110

Arg Ala  Ala Gly Ser Trp Thr  Trp Thr Phe Cys Arg  Ala Ser Trp
    4115                4120                4125

Cys Arg  Ser Ala Gly Cys Arg  Cys Pro Arg Ser Trp  Arg Pro Ser
    4130                4135                4140

Thr Ser  Arg Cys Val Trp Ala  Ser Thr Thr Leu Gly  Arg Ser Thr
    4145                4150                4155

Arg Pro  Arg Thr Cys Pro Thr  Arg Arg Arg Ser Thr  Gly Phe Thr
    4160                4165                4170

Cys Ala  Pro Lys Cys Pro Ala  Thr Ile Trp Gly Cys  Thr Ala Thr
    4175                4180                4185

Thr Gly  Cys Thr Ala Arg Ala  Pro Ala Ala Gly Ala  Ser Ala Thr
    4190                4195                4200

Arg Ser  Cys Thr Ala Cys Ser  Gly Pro Pro Gly Pro  Gly Pro Arg
    4205                4210                4215

Gly Arg  Ala Thr Leu Thr Trp  Ala Arg Thr Cys Ala  Gly Ser Pro
    4220                4225                4230

Ala Ala  Gly Pro Trp Lys Leu  Pro Ala Val Pro Pro  Thr Trp Arg
    4235                4240                4245

Arg Trp  Thr Met Arg Arg Arg  Arg Ala Ser Thr Trp  Lys Thr Asp
    4250                4255                4260

Gly Ala  Thr Val Phe Leu Leu  Asp Ala Ala Thr Ala  Thr Ala Ala
    4265                4270                4275

Ala Ser  Ser Arg Asp Ala Gly  Gly Ala Ala Glu Pro  Ala Val Arg
    4280                4285                4290
```

```
His Leu  Leu Gly Arg Leu Asp  Pro Gly His Ala Thr  His His Gly
    4295                4300                4305

Ala Asp  Asp Pro Gln Ser Arg  Ser Leu Thr Ala Ala  Ser Gly Gln
    4310                4315                4320

Pro Ala  Leu Gly His Pro Gly  Gly Arg Gly Ala Leu  Ala Leu Glu
    4325                4330                4335

Pro His  Ala Arg Glu Gly Ala  Gly His Arg Glu Arg  Ala Gly Gly
    4340                4345                4350

Glu Gln  Gly His Pro Arg Arg  Gly Arg Ala Gly Val  Gln Arg Ala
    4355                4360                4365

Ala Gly  Ala Arg Gly Pro Leu  Gln Gln His Gln Arg  Ala Asp Glu
    4370                4375                4380

Pro Gly  Pro His Gly Asp Arg  Arg Ala Arg Gly Gly  Val Ala Ala
    4385                4390                4395

Arg Ala  Val Pro Pro Arg Val  Glu Pro Gly Leu His  Gly Gly Ala
    4400                4405                4410

Glu Arg  Leu Pro Glu His Ala  Ala Arg Gln Arg Ala  Pro Gly Pro
    4415                4420                4425

Gly Gly  Leu His Gln Leu His  Gln Arg Ala Ala Ala  Asp Gly Gly
    4430                4435                4440

Arg Gly  Ala Pro Glu Arg Gly  Val Pro Val Gly Ala  Gly Leu Leu
    4445                4450                4455

Leu Pro  Asp Gln Ser Pro Gly  Leu Ala Asp Arg Glu  Pro Glu Pro
    4460                4465                4470

Gly Phe  Gln Glu Leu Ala Gly  Thr Val Gly Arg Ala  Gly Pro Gly
    4475                4480                4485
```

```
Arg Gly  Pro Arg Asp Gly Val  Glu Pro Ala Asp Ala  Glu Leu Ala
    4490                4495                4500


Pro Ala  Ala Ala Ala Gly Gly  Ala Leu His Gly Gln  Arg Gln Arg
    4505                4510                4515


Glu Pro  Arg Leu Val Pro Gly  Leu Pro Ala Pro Val  Pro Arg Gly
    4520                4525                4530


His Arg  Thr Gly Ala Arg Gly  Arg Ala Asp Leu Pro  Gly Asp His
    4535                4540                4545


Pro Arg  Glu Pro Arg Ala Gly  Pro Gly Gly Pro Gly  Gln Pro Gly
    4550                4555                4560


Gly His  Pro Glu Leu Pro Ala  Asp Gln Pro Val Ala  Glu Asp Pro
    4565                4570                4575


Ala Pro  Val Arg Ala Glu His  Arg Gly Gly Ala His  Pro Ala Leu
    4580                4585                4590


Arg Ala  Ala Glu Arg Gly Ala  Val Pro Asp Ala Gly  Gly Gly His
    4595                4600                4605


Ala Gln  Arg Gly Ala Arg His  Asp Arg Ala Gln His  Gly Ala Gln
    4610                4615                4620


His Val  Arg Pro Gln Pro Pro  Val His Gln Ala Asp  Gly Leu Leu
    4625                4630                4635


Ala Ser  Gly Gly Arg His Glu  Leu Gly Leu Leu Tyr  Gln Arg His
    4640                4645                4650


Leu Glu  Pro Ala Leu Ala Pro  Ala Ala Arg Val Leu  His Gly Arg
    4655                4660                4665


Val Arg  His Ala Arg Pro Gln  Arg Arg Val Pro Val  Gly Arg Arg
    4670                4675                4680
```

```
Gly Gln  Gln Arg Val Leu Ala  Ala Ser Arg Asn Gln  Cys Arg Val
    4685                4690                4695

Glu Glu  Arg Gly Arg Gly Pro  Ala Ala Val Leu Gly  Ala Val Arg
    4700                4705                4710

Ser Arg  Gly Cys Cys Arg Gly  Gly Ala Arg Gly Arg  Gln Pro Leu
    4715                4720                4725

Pro Glu  Pro Ala Leu Phe Ala  Glu Gln Arg Ala Gln  Gln Arg Ala
    4730                4735                4740

Gly Ser  Ala Asp Ala Thr Ala  Pro Ala Gly Arg Gly  Gly Val Pro
    4745                4750                4755

Glu Arg  Leu Leu Val Glu Ala  Arg Ala Arg Glu Glu  Leu Pro Gln
    4760                4765                4770

Arg Asp  Arg Glu Pro Gly Gly  Gln Asp Glu Pro Leu  Glu Asp Val
    4775                4780                4785

Arg Ala  Arg Ala Gln Gly Arg  Ala Pro Ser Gln Arg  Arg His Pro
    4790                4795                4800

Thr Pro  Ala Ala Arg Gln Ala  Ala Gly Thr Gly Val  Gly Arg Gly
    4805                4810                4815

Phe Arg  Arg Arg Gln Gln Arg  Val Gly Leu Gly Trp  Glu Trp Trp
    4820                4825                4830

Pro Val  Arg Ser Pro Ala Pro  Pro Tyr Arg Ala Pro  Asp Val Arg
    4835                4840                4845

Ile Lys  Asn Lys Arg Arg Tyr  Ser Pro Arg Pro Trp  Arg Pro Ala
    4850                4855                4860

Cys Val  Leu Leu Cys Cys Leu  Tyr Asp Glu Ala Arg  Val Pro Gly
    4865                4870                4875
```

```
Gly Ser  Ser Ser Leu Val Arg  Glu Arg Asp Ala Ala  Gly Gly Gly
    4880                 4885                 4890


Gly Gly  Asp Ala Ala Pro Ala  Gly Gly Ala Leu Arg  Ala Pro Ala
    4895                 4900                 4905


Val Pro  Gly Ala Tyr Gly Gly  Ala Glu Gln His Ser  Leu Leu Gly
    4910                 4915                 4920


Ala Gly  Thr Leu Val Arg Tyr  His Pro Val Val Pro  Gly Gly Gln
    4925                 4930                 4935


Gln Val  Gly Arg His Arg Leu  Ala Glu Leu Pro Glu  Arg Pro Gln
    4940                 4945                 4950


Gln Leu  Pro Asp His Arg Gly  Ala Glu Gln Arg Phe  His Pro His
    4955                 4960                 4965


Gly Gly  Gln His Pro Asp His  Gln Leu Arg Ala Leu  Ala Val Gly
    4970                 4975                 4980


Arg Pro  Ala Glu Asn His His  Ala His Gln His Ala  Gln Arg Glu
    4985                 4990                 4995


Arg Val  His Val Gln Gln Gln  Val Gln Gly Ala Gly  Asp Gly Leu
    5000                 5005                 5010


Ala Gln  Asp Pro Gln Arg Gly  Gly Leu Trp Ser Gly  Arg Ala Asp
    5015                 5020                 5025


Leu Arg  Val Gly Gly Val Ala  Ala Arg Gly Gln Leu  Leu Gly Asp
    5030                 5035                 5040


His Asp  His Arg Ser Asp Glu  Gln Arg His His Arg  Gln Leu Leu
    5045                 5050                 5055


Gly Gly  Gly Ala Ala Glu Arg  Gly Ala Gly Glu Arg  His Arg Arg
    5060                 5065                 5070
```

```
Glu Val  Arg His Ala Gln Leu  Pro Ala Gly Leu Gly  Pro Arg Asp
    5075                5080                5085


Arg Ala  Gly Asp Ala Gly Arg  Val His Gln Arg Gly  Leu Pro Pro
    5090                5095                5100


Arg His  Arg Pro Ala Ala Arg  Leu Arg Arg Gly Leu  His Arg Glu
    5105                5110                5115


Pro Pro  Gln Gln Pro Ala Gly  His Pro Gln Ala Ala  Ala Leu Pro
    5120                5125                5130


Gly Gly  Leu Pro Asp Pro Val  Arg Gly Pro Gly Gly  Gly Gln His
    5135                5140                5145


Pro Arg  Ala Leu Gly Cys Arg  Ser Leu Arg Glu Lys  Gln Gly Gly
    5150                5155                5160


His Arg  Arg Gly Asp Arg Ser  Arg Gly His Arg Leu  Tyr Arg Gly
    5165                5170                5175


Ala Gly  Arg Phe Cys Arg Cys  Gly Ser Gly Arg Gly  Gly Asn Arg
    5180                5185                5190


Lys Asp  Ser His Pro Ala Gly  Gly Glu Gly Gln Gln  Gly Gln Glu
    5195                5200                5205


Leu Gln  Arg Ala Arg Gly Gln  Glu Lys His Arg Leu  Pro Gln Leu
    5210                5215                5220


Val Pro  Gly Leu Gln Leu Arg  Arg Pro Arg Glu Gly  Arg Ala Leu
    5225                5230                5235


Leu Asp  Ala Ala His His Leu  Gly Arg His Leu Arg  Arg Gly Ala
    5240                5245                5250


Ser Leu  Leu Val Ala Ala Arg  His Asp Ala Arg Pro  Gly His Leu
    5255                5260                5265
```

```
Pro Leu  His Ala Ser Ser Gln  Leu Pro Gly Gly Gly  Arg Arg Ala
    5270                5275                5280


Pro Ala  Arg Leu Leu Gln Glu  Leu Leu Gln Arg Ala  Gly Arg Leu
    5285                5290                5295


Leu Ala  Ala Ala Ala Arg Leu  His Leu Ala His Ala  Arg Leu Gln
    5300                5305                5310


Pro Leu  Pro Arg Glu Pro Asp  Pro Arg Pro Pro Ala  Arg Ala His
    5315                5320                5325


His Tyr  His Arg Gln Lys Arg  Ser Cys Ser His Arg  Ser Arg Asp
    5330                5335                5340


Pro Ala  Ala Ala Gln Gln Tyr  Pro Gly Ser Pro Ala  Arg Asp Arg
    5345                5350                5355


His Arg  Gln Thr Pro His Leu  Pro Leu Arg Leu Gln  Gly Pro Gly
    5360                5365                5370


Arg Ser  Arg Ala Ala Arg Pro  Leu Glu Pro His Leu  Leu Lys Asn
    5375                5380                5385


Val His  Ser His Leu Ala Gln  His Arg Leu Gly Pro  Ala Arg Ala
    5390                5395                5400


Gln Gln  Asp Val Arg Arg Arg  Ser Pro Thr Leu His  Ala Thr Pro
    5405                5410                5415


Arg Ala  Arg Ala Arg Ala Leu  Pro Arg Ser Leu Gly  Arg Pro Gln
    5420                5425                5430


Gly Pro  Arg Ala Leu Ala His  His Arg Arg Arg Arg  Asp Arg Pro
    5435                5440                5445


Gly Gly  Gly Arg Arg Ala Gln  Leu His Ala Arg Arg  Arg Ala Arg
    5450                5455                5460
```

```
Leu His  Arg Gly Arg Arg His  Arg Gln Arg Gly Gly  Arg Arg Ala
    5465                5470                5475

Pro Val  Arg Pro His Gln Glu  Pro Ala Ala Ala His  Arg Pro Ala
    5480                5485                5490

Ala Pro  Glu His Pro Arg His  Ala Arg Gly Ala Ser  Leu Ala Ala
    5495                5500                5505

Gln Gly  Gln Ala His Gly Thr  Gln Gly His Ala Gln  Gly Gly Gln
    5510                5515                5520

Thr Arg  Gly Leu Arg Gln Gln  Gln Arg Arg Gln Asp  Pro Gln Thr
    5525                5530                5535

Arg Gly  His Gly Gly Gly Gly  Gly His Arg Gln His  Val Pro Pro
    5540                5545                5550

Ala Ala  Arg Gln Arg Val Leu  Gly Ala Arg Arg Arg  His Arg Cys
    5555                5560                5565

Ala Arg  Ala Arg Ala His Pro  Pro Pro Ser His Leu  Lys Met Leu
    5570                5575                5580

Thr Ser  Arg Cys Cys Val Pro  Ala Ala Arg Arg Met  Ser Lys Arg
    5585                5590                5595

Lys Tyr  Lys Glu Glu Met Leu  Gln Val Ile Ala Pro  Glu Ile Tyr
    5600                5605                5610

Gly Pro  Ala Ala Ala Val Lys  Glu Glu Arg Lys Pro  Arg Lys Leu
    5615                5620                5625

Lys Arg  Val Lys Lys Asp Lys  Lys Glu Glu Glu Asp  Asp Gly Leu
    5630                5635                5640

Val Glu  Phe Val Arg Glu Phe  Ala Pro Arg Arg Arg  Val Gln Trp
    5645                5650                5655
```

```
Arg Gly  Arg Lys Val Lys Pro  Val Leu Arg Pro Gly  Thr Thr Val
    5660                 5665                 5670


Val Phe  Thr Pro Gly Glu Arg  Ser Gly Ser Ala Ser  Lys Arg Ser
    5675                 5680                 5685


Tyr Asp  Glu Val Tyr Gly Asp  Glu Asp Ile Leu Glu  Gln Ala Val
    5690                 5695                 5700


Glu Arg  Leu Gly Glu Phe Ala  Tyr Gly Lys Arg Ser  Arg Pro Ala
    5705                 5710                 5715


Pro Leu  Lys Glu Glu Ala Val  Ser Ile Pro Leu Asp  His Gly Asn
    5720                 5725                 5730


Pro Thr  Pro Ser Leu Lys Pro  Val Thr Leu Gln Gln  Val Leu Pro
    5735                 5740                 5745


Ser Ala  Ala Pro Arg Arg Gly  Phe Lys Arg Glu Gly  Gly Glu Asp
    5750                 5755                 5760


Leu Tyr  Pro Thr Met Gln Leu  Met Val Pro Lys Arg  Gln Lys Leu
    5765                 5770                 5775


Glu Asp  Val Leu Glu His Met  Lys Val Asp Pro Glu  Val Gln Pro
    5780                 5785                 5790


Glu Val  Lys Val Arg Pro Ile  Lys Gln Val Ala Pro  Gly Leu Gly
    5795                 5800                 5805


Val Gln  Thr Val Asp Ile Lys  Ile Pro Thr Glu Pro  Met Glu Thr
    5810                 5815                 5820


Gln Thr  Glu Pro Val Lys Pro  Ser Thr Ser Thr Met  Glu Val Gln
    5825                 5830                 5835


Thr Asp  Pro Trp Met Pro Ala  Pro Ala Ser Thr Ser  Thr Arg Arg
    5840                 5845                 5850
```

```
Arg Arg  Lys Tyr Gly Ala Ala  Ser Leu Leu Met Pro  Asn Tyr Ala
    5855                5860                5865

Leu His  Pro Ser Ile Ile Pro  Thr Pro Gly Tyr Arg  Gly Thr Arg
    5870                5875                5880

Phe Tyr  Arg Gly Tyr Thr Ser  Ser Arg Arg Arg Lys  Thr Thr Thr
    5885                5890                5895

Arg Arg  Arg Arg Arg Ser Arg  Arg Ser Ser Thr Ala  Thr Ser Ala
    5900                5905                5910

Leu Val  Arg Arg Val Tyr Arg  Ser Gly Arg Glu Pro  Leu Thr Leu
    5915                5920                5925

Pro Arg  Ala Arg Tyr His Pro  Ser Ile Ala Ile Leu  Pro Pro Pro
    5930                5935                5940

Thr Cys  Arg Tyr Gly Pro His  Met Pro Pro Pro Arg  Pro His Tyr
    5945                5950                5955

Gly Leu  Pro Arg Lys Lys Ala  Ala Pro Lys Ala Asp  Gly Glu Arg
    5960                5965                5970

Ala Ala  Ser Pro Ser Pro Pro  Ala Ala Ala Arg His  Gln Gln Ala
    5975                5980                5985

Val Gly  Gly Arg Leu Pro Ala  Arg Ala Asp Pro His  His Arg Arg
    5990                5995                6000

Gly Asp  Arg Gly Asp Pro Arg  His Ser Phe Arg Gly  Gly Ala Gly
    6005                6010                6015

Leu Ser  Ala Pro Leu Arg His  Lys Lys Ala Trp Ile  Cys Asn Lys
    6020                6025                6030

Lys Lys  Asn Gly Leu Thr Leu  Leu Val Leu Cys Val  Phe Leu Asp
    6035                6040                6045
```

```
Gly Arg  His Gln Phe Phe Val  Pro Gly Thr Ala Thr  Arg His Ala
    6050                6055                6060

Ala Val  Tyr Gly His Leu Glu  Arg His Arg Gln Gln  Pro Thr Glu
    6065                6070                6075

Arg Gly  Arg Leu Gln Leu Glu  Gln Ser Leu Glu Arg  Ala Glu Phe
    6080                6085                6090

Arg Val  His Ala Gln Asn Leu  Trp Gln Gln Gly Val  Glu Gln Gln
    6095                6100                6105

His Arg  Ala Gly Ala Glu Gly  Lys Ala Glu Arg Thr  Glu Leu Pro
    6110                6115                6120

Ala Glu  Gly Gly Trp Pro Gly  Leu Arg His Gln Arg  Gly Gly Pro
    6125                6130                6135

Gly Gln  Pro Gly Arg Ala Glu  Thr Asp Gln Gln Pro  Pro Gly Arg
    6140                6145                6150

Gly Pro  Ala Arg Gly Val Arg  Gly Asp Ala Pro Gly  Gly Gly Gly
    6155                6160                6165

Ala Ala  Ser Pro Gly Gln Ala  Arg Arg Gln Ala Thr  Ala Ser Arg
    6170                6175                6180

Arg Gly  Gly Asp Ala Ala Asp  Ala His Gly Arg Ala  Ala Pro Val
    6185                6190                6195

Arg Gly  Gly Gly Glu Thr Gly  Pro Ala His His Ala  Ala Arg Gly
    6200                6205                6210

Ala Ser  Gly His Arg Ser Ala  Glu Thr Gln Gln Gln  Pro Ala Arg
    6215                6220                6225

Asp Pro  Gly Leu Ala Ser Ala  Ser Pro Leu His Ser  Gly Ala Pro
    6230                6235                6240
```

```
Ala Ala  Gly Gly Arg Arg Val  Ala Arg Pro Pro Arg  Pro Pro Pro
    6245                 6250                 6255


Gly Glu  Leu Ala Glu His Ser  Glu Gln His Arg Gly  Ser Gly Ser
    6260                 6265                 6270


Ala Glu  Cys Glu Ala Pro Pro  Leu Leu Leu Lys Asp  Thr Val Ala
    6275                 6280                 6285


Leu Asn  Leu Leu Val Cys Val  Tyr Met Tyr Val Arg  Arg Pro Glu
    6290                 6295                 6300


Gly Gly  Val Arg Gly Ala Ser  Pro Ser Cys Lys Met  Ala Thr Pro
    6305                 6310                 6315


Ser Met  Leu Pro Gln Trp Ala  Tyr Met His Ile Ala  Gly Gln Asp
    6320                 6325                 6330


Ala Ser  Glu Tyr Leu Ser Pro  Gly Leu Val Gln Phe  Ala Arg Ala
    6335                 6340                 6345


Thr Asp  Thr Tyr Phe Ser Leu  Gly Asn Lys Phe Arg  Asn Pro Thr
    6350                 6355                 6360


Val Ala  Pro Thr His Asp Val  Thr Thr Asp Arg Ser  Gln Arg Leu
    6365                 6370                 6375


Thr Leu  Arg Phe Val Pro Val  Asp Arg Glu Asp Asn  Thr Tyr Ser
    6380                 6385                 6390


Tyr Lys  Val Arg Tyr Thr Leu  Ala Val Gly Asp Asn  Arg Val Leu
    6395                 6400                 6405


Asp Met  Ala Ser Thr Tyr Phe  Asp Ile Arg Gly Val  Leu Asp Arg
    6410                 6415                 6420


Gly Pro  Ser Phe Lys Pro Tyr  Ser Gly Thr Ala Tyr  Asn Ser Leu
    6425                 6430                 6435
```

```
Ala Pro  Lys Gly Ala Pro Asn  Ser Ser Gln Trp Glu  Gln Ala Lys
    6440                6445                6450


Thr Gly  Asn Gly Gly Thr Met  Glu Thr His Thr Tyr  Gly Val Ala
    6455                6460                6465


Pro Met  Gly Gly Glu Asn Ile  Thr Lys Asp Gly Leu  Gln Ile Gly
    6470                6475                6480


Thr Asp  Val Thr Ala Asn Gln  Asn Lys Pro Ile Tyr  Ala Asp Lys
    6485                6490                6495


Thr Phe  Gln Pro Glu Pro Gln  Val Gly Glu Glu Asn  Trp Gln Glu
    6500                6505                6510


Thr Glu  Asn Phe Tyr Gly Gly  Arg Ala Leu Lys Lys  Asp Thr Asn
    6515                6520                6525


Met Lys  Pro Cys Tyr Gly Ser  Tyr Ala Arg Pro Thr  Asn Glu Lys
    6530                6535                6540


Gly Gly  Gln Ala Lys Leu Lys  Val Gly Asp Asp Gly  Val Pro Thr
    6545                6550                6555


Lys Glu  Phe Asp Ile Asp Leu  Ala Phe Phe Asp Thr  Pro Gly Gly
    6560                6565                6570


Thr Val  Asn Gly Gln Asp Glu  Tyr Lys Ala Asp Ile  Val Met Tyr
    6575                6580                6585


Thr Glu  Asn Thr Tyr Leu Glu  Thr Pro Asp Thr His  Val Val Tyr
    6590                6595                6600


Lys Pro  Gly Lys Asp Asp Ala  Ser Ser Glu Ile Asn  Leu Val Gln
    6605                6610                6615


Gln Ser  Met Pro Asn Arg Pro  Asn Tyr Ile Gly Phe  Arg Asp Asn
    6620                6625                6630
```

```
Phe Ile  Gly Leu Met Tyr Tyr  Asn Ser Thr Gly Asn  Met Gly Val
    6635                6640                6645

Leu Ala  Gly Gln Ala Ser Gln  Leu Asn Ala Val Val  Asp Leu Gln
    6650                6655                6660

Asp Arg  Asn Thr Glu Leu Ser  Tyr Gln Leu Leu Leu  Asp Ser Leu
    6665                6670                6675

Gly Asp  Arg Thr Arg Tyr Phe  Ser Met Trp Asn Gln  Ala Val Asp
    6680                6685                6690

Ser Tyr  Asp Pro Asp Val Arg  Ile Ile Glu Asn His  Gly Val Glu
    6695                6700                6705

Asp Glu  Leu Pro Asn Tyr Cys  Phe Pro Leu Asp Gly  Ser Gly Thr
    6710                6715                6720

Asn Ala  Ala Tyr Gln Gly Val  Lys Val Lys Asp Gly  Gln Asp Gly
    6725                6730                6735

Asp Val  Glu Ser Glu Trp Glu  Asn Asp Asp Thr Val  Ala Ala Arg
    6740                6745                6750

Asn Gln  Leu Cys Lys Gly Asn  Ile Phe Ala Met Glu  Ile Asn Leu
    6755                6760                6765

Gln Ala  Asn Leu Trp Arg Ser  Phe Leu Tyr Ser Asn  Val Ala Leu
    6770                6775                6780

Tyr Leu  Pro Asp Ser Tyr Lys  Tyr Thr Pro Thr Asn  Val Thr Leu
    6785                6790                6795

Pro Thr  Asn Thr Asn Thr Tyr  Asp Tyr Met Asn Gly  Arg Val Thr
    6800                6805                6810

Pro Pro  Ser Leu Val Asp Ala  Tyr Leu Asn Ile Gly  Ala Arg Trp
    6815                6820                6825
```

```
Ser Leu  Asp Pro Met Asp Asn  Val Asn Pro Phe Asn  His His Arg
    6830                 6835                 6840

Asn Ala  Gly Leu Arg Tyr Arg  Ser Met Leu Leu Gly  Asn Gly Arg
    6845                 6850                 6855

Tyr Val  Pro Phe His Ile Gln  Val Pro Gln Lys Phe  Phe Ala Ile
    6860                 6865                 6870

Lys Ser  Leu Leu Leu Leu Pro  Gly Ser Tyr Thr Tyr  Glu Trp Asn
    6875                 6880                 6885

Phe Arg  Lys Asp Val Asn Met  Ile Leu Gln Ser Ser  Leu Gly Asn
    6890                 6895                 6900

Asp Leu  Arg Thr Asp Gly Ala  Ser Ile Ala Phe Thr  Ser Ile Asn
    6905                 6910                 6915

Leu Tyr  Ala Thr Phe Phe Pro  Met Ala His Asn Thr  Ala Ser Thr
    6920                 6925                 6930

Leu Glu  Ala Met Leu Arg Asn  Asp Thr Asn Asp Gln  Ser Phe Asn
    6935                 6940                 6945

Asp Tyr  Leu Ser Ala Ala Asn  Met Leu Tyr Pro Ile  Pro Ala Asn
    6950                 6955                 6960

Ala Thr  Asn Val Pro Ile Ser  Ile Pro Ser Arg Asn  Trp Ala Ala
    6965                 6970                 6975

Phe Arg  Gly Trp Ser Phe Thr  Arg Leu Lys Thr Arg  Glu Thr Pro
    6980                 6985                 6990

Ser Leu  Gly Ser Gly Phe Asp  Pro Tyr Phe Val Tyr  Ser Gly Ser
    6995                 7000                 7005

Ile Pro  Tyr Leu Asp Gly Thr  Phe Tyr Leu Asn His  Thr Phe Lys
    7010                 7015                 7020
```

```
Lys Val  Ser Ile Thr Phe Asp  Ser Ser Val Ser Trp  Pro Gly Asn
    7025                 7030                 7035


Asp Arg  Leu Leu Thr Pro Asn  Glu Phe Glu Ile Lys  Arg Thr Val
    7040                 7045                 7050


Asp Gly  Glu Gly Tyr Asn Val  Ala Gln Cys Asn Met  Thr Lys Asp
    7055                 7060                 7065


Trp Phe  Leu Val Gln Met Leu  Ala His Tyr Asn Ile  Gly Tyr Gln
    7070                 7075                 7080


Gly Phe  Tyr Val Pro Glu Gly  Tyr Lys Asp Arg Met  Tyr Ser Phe
    7085                 7090                 7095


Phe Arg  Asn Phe Gln Pro Met  Ser Arg Gln Val Val  Asp Glu Val
    7100                 7105                 7110


Asn Tyr  Lys Asp Tyr Gln Ala  Val Thr Leu Ala Tyr  Gln His Asn
    7115                 7120                 7125


Asn Ser  Gly Phe Val Gly Tyr  Leu Ala Pro Thr Met  Arg Gln Gly
    7130                 7135                 7140


Gln Pro  Tyr Pro Ala Asn Tyr  Pro Tyr Pro Leu Ile  Gly Lys Ser
    7145                 7150                 7155


Ala Val  Ala Ser Val Thr Gln  Lys Lys Phe Leu Cys  Asp Arg Val
    7160                 7165                 7170


Met Trp  Arg Ile Pro Phe Ser  Ser Asn Phe Met Ser  Met Gly Ala
    7175                 7180                 7185


Leu Thr  Asp Leu Gly Gln Asn  Met Leu Tyr Ala Asn  Ser Ala His
    7190                 7195                 7200


Ala Leu  Asp Met Asn Phe Glu  Val Asp Pro Met Asp  Glu Ser Thr
    7205                 7210                 7215
```

```
Leu Leu  Tyr Val Val Phe Glu  Val Phe Asp Val Val  Arg Val His
    7220                7225                7230

Gln Pro  His Arg Gly Val Ile  Glu Ala Val Tyr Leu  Arg Thr Pro
    7235                7240                7245

Phe Ser  Ala Gly Asn Ala Thr  Thr Ala Ala Leu Ala  Ser Cys Lys
    7250                7255                7260

Met Thr  Ala Gly Ser Gly Glu  Gln Glu Leu Arg Ala  Ile Leu Arg
    7265                7270                7275

Asp Leu  Gly Cys Gly Pro Cys  Phe Leu Gly Thr Phe  Asp Lys Arg
    7280                7285                7290

Phe Pro  Gly Phe Met Ala Pro  His Lys Leu Ala Cys  Ala Ile Val
    7295                7300                7305

Asn Thr  Ala Gly Arg Glu Thr  Gly Gly Glu His Trp  Leu Ala Phe
    7310                7315                7320

Ala Trp  Asn Pro Arg Ser His  Thr Cys Tyr Leu Phe  Asp Pro Phe
    7325                7330                7335

Gly Phe  Ser Asp Glu Arg Leu  Lys Gln Ile Tyr Gln  Phe Glu Tyr
    7340                7345                7350

Glu Gly  Leu Leu Arg Arg Ser  Ala Leu Ala Thr Glu  Asp Arg Cys
    7355                7360                7365

Val Thr  Leu Glu Lys Ser Thr  Gln Thr Val Gln Gly  Pro Arg Ser
    7370                7375                7380

Ala Ala  Cys Gly Leu Phe Cys  Cys Met Phe Leu His  Ala Phe Val
    7385                7390                7395

His Trp  Pro Asp Arg Pro Met  Asp Lys Asn Pro Thr  Met Asn Leu
    7400                7405                7410
```

```
Leu Thr  Gly Val Pro Asn Gly  Met Leu Gln Ser Pro  Gln Val Glu
    7415                 7420                 7425


Pro Thr  Leu Arg Arg Asn Gln  Glu Ala Leu Tyr Arg  Phe Leu Asn
    7430                 7435                 7440


Ala His  Ser Ala Tyr Phe Arg  Ser His Arg Ala Arg  Ile Glu Lys
    7445                 7450                 7455


Ala Thr  Ala Phe Asp Arg Met  Asn Gln Asp Met Lys  Thr Gly Val
    7460                 7465                 7470


Cys Met  Met Leu Tyr Ser Thr  Ala His Val Tyr Ala  Thr Phe Ser
    7475                 7480                 7485


Glu Ala  Leu Thr Leu Phe Arg  Asn Arg Arg Gly Ser  Ala Gly Ser
    7490                 7495                 7500


Arg His  Gly Pro Arg Ala Gly  Ile Arg Cys Gly Thr  Gly Thr Trp
    7505                 7510                 7515


Ala Ala  Thr Thr Arg Gly Ser  Ala Ala Trp Ala Arg  Gly Gly Arg
    7520                 7525                 7530


Gly Thr  Ser Arg Ser Thr Ala  Cys Ala Val Ala Gly  Arg Pro Ala
    7535                 7540                 7545


Gly Arg  Ala Arg Arg Ser Asn  Arg Ser Trp Asp Pro  Arg Ser Ala
    7550                 7555                 7560


Arg Glu  Ser Cys Gly Thr Arg  Gly Cys Ser Thr Gly  Thr Pro Ser
    7565                 7570                 7575


Gly Pro  Gly Ala Ser Arg Leu  Pro Ala Pro Ser Arg  Arg Cys Pro
    7580                 7585                 7590


Pro Arg  Pro Asp Pro Arg Arg  Trp Pro Ser Arg Arg  Gly Ser Ser
    7595                 7600                 7605
```

```
Cys Arg  Ser Ala Ala Pro Cys  Trp Ala Arg Ser Arg  Ala Cys Gly
    7610                 7615                 7620


Cys Asn  Arg Ser Ala Gly Gly  Ser Ala Ser Ser Gly  Pro Ala Arg
    7625                 7630                 7635


Ser Ser  Cys Pro Gly Thr Trp  Pro Ser Lys Pro Pro  Ala Gly Gly
    7640                 7645                 7650


Arg Pro  Ala Ala Pro Cys Arg  Pro Arg Arg Arg Pro  Arg Arg Thr
    7655                 7660                 7665


Cys Arg  Thr Gly Trp Trp Arg  Ser Arg Arg Arg Ala  Arg Ser Ser
    7670                 7675                 7680


Ala Arg  Arg Cys Trp Pro Ala  Ala Pro Arg Cys Ala  Pro Ser Gly
    7685                 7690                 7695


Ser Gly  Ser Trp Pro Gly Trp  Gly Ser Pro Ser Ala  Arg Ala Ala
    7700                 7705                 7710


Arg Ser  Arg Ser Pro His Pro  Ser Arg Cys Ala Pro  Ser Gly Ser
    7715                 7720                 7725


Ser Arg  Ser Arg Ala Gly Thr  Ala Ala Cys Pro Arg  Leu Arg Cys
    7730                 7735                 7740


Ser Arg  Ala Ala Thr Ala Arg  Ser Arg Cys Thr Pro  Ser Ser Cys
    7745                 7750                 7755


Gly Arg  Ser Gly Ser Ala Ser  Ala Arg Ser Pro Ala  Gly Ser Gly
    7760                 7765                 7770


Pro Ser  Ser Arg Ser Gly Ser  Cys Cys Trp Arg Ser  Ala Gly Cys
    7775                 7780                 7785


Arg Gly  Ala Pro Arg Ser His  Thr Gly Gly Arg Cys  Gly Gly Thr
    7790                 7795                 7800
```

```
Pro Arg  Pro Ala Arg Ala Ser  Ala Gly Arg Arg Thr  Ser Gly Arg
    7805                 7810                 7815


Ser Pro  Arg Gly Thr Gly Pro  Ser Ala Ala Ser Ser  Leu Pro Cys
    7820                 7825                 7830


Pro Ser  Pro Arg Pro Lys Arg  Ser Ala Gly Ser Gly  Gly Ser Ser
    7835                 7840                 7845


Pro Pro  Leu Ser Ser Ser Pro  Pro Pro Arg Ser Gly  Gly Arg Ser
    7850                 7855                 7860


Arg Pro  Gly Ser Gln Thr Leu  Ala Cys Arg Pro Ser  Arg Cys Ala
    7865                 7870                 7875


Arg Gly  Glu Ser Ser Pro Arg  Pro Pro Ala Pro Pro  Arg Pro Ala
    7880                 7885                 7890


Phe Arg  Pro Arg Cys Pro Gly  Cys Leu Ala Lys Ala  His Ala Trp
    7895                 7900                 7905


Ser Cys  Gly Val Ser Phe Trp  Ala Ala Glu Ala Ala  Ala Met Cys
    7910                 7915                 7920


Trp Glu  Ser Ala Ser Ser Arg  Ser Pro Arg Leu Phe  Leu Leu Leu
    7925                 7930                 7935


Gly Arg  Arg Pro Arg Pro Arg  Gly Gly Arg His Ala  Ser Ser Gly
    7940                 7945                 7950


Ala Glu  Ala Glu Ala Thr Gly  Ser Arg Gly Ser Ala  Gly Gly Trp
    7955                 7960                 7965


Gln Ser  Pro Phe Arg Val Arg  Gly Cys Ala Pro Gly  Gly Ala Ala
    7970                 7975                 7980


Leu Thr  Asp Phe Leu Arg Gly  Arg Pro Leu Cys Ser  Pro Arg Glu
    7985                 7990                 7995
```

```
Gln Gln  Gln Ala Trp Arg Leu  Ser His Arg Arg Gln  His Arg His
    8000                 8005                 8010

Leu Pro  Pro Pro Pro Pro Pro  Thr Arg Thr Ser Ser  Arg Met Lys
    8015                 8020                 8025

Ala Pro  Pro Arg Arg Pro Ala  Pro Pro Pro Thr Pro  Arg Pro Gln
    8030                 8035                 8040

Thr Cys  Lys Arg Trp Arg Asn  Pro Ser Arg Leu Thr  Trp Ala Thr
    8045                 8050                 8055

Arg Pro  Arg Ser Thr Arg Arg  Ser Trp Gln Arg Ala  Phe Gln Pro
    8060                 8065                 8070

Arg Lys  Arg Thr Thr Lys Ser  Ser Gln Ser Arg Lys  Gln Arg Thr
    8075                 8080                 8085

Ser Arg  Thr Arg Leu Gly Thr  Ser Met Ala Thr Thr  Ala Gly Gln
    8090                 8095                 8100

Arg Thr  Cys Ser Ser Ser Ile  Trp Pro Ala Asn Ala  Ser Ser Ser
    8105                 8110                 8115

Arg Thr  Arg Cys Ser Thr Ala  Pro Arg Cys Pro Ser  Ala Trp Arg
    8120                 8125                 8130

Ser Ser  Ala Ala Pro Thr Ser  Ala Thr Ser Ser Arg  Arg Ala Cys
    8135                 8140                 8145

Pro Pro  Ser Ala Ser Pro Thr  Ala Pro Val Ser Pro  Thr Arg Ala
    8150                 8155                 8160

Ser Thr  Ser Thr Arg Ser Ser  Arg Cys Pro Arg Pro  Trp Pro Pro
    8165                 8170                 8175

Thr Thr  Ser Phe Ser Arg Thr  Lys Gly Ser Pro Ser  Pro Ala Ala
    8180                 8185                 8190
```

```
Pro Thr  Ala Pro Ala Pro Thr  Pro Cys Ser Thr Trp  Ala Pro Ala
    8195                 8200                 8205

Pro Ala  Tyr Leu Ile Ser Pro  Pro Trp Lys Arg Phe  Pro Arg Ser
    8210                 8215                 8220

Ser Arg  Val Trp Ala Ala Thr  Arg Leu Gly Pro Arg  Thr Leu Cys
    8225                 8230                 8235

Lys Glu  Ala Glu Arg Ser Met  Ser Thr Thr Ala Pro  Trp Trp Ser
    8240                 8245                 8250

Trp Lys  Ala Thr Thr Arg Ala  Trp Arg Ser Ser Ser  Ala Arg Ser
    8255                 8260                 8265

Ser Pro  Thr Ser Pro Thr Arg  Arg Ser Thr Cys Pro  Pro Arg Ser
    8270                 8275                 8280

Ala Pro  Ser Trp Thr Arg Cys  Ser Ser Ser Ala Pro  Arg Pro Ser
    8285                 8290                 8295

Arg Arg  Arg Arg Cys Arg Thr  Pro Arg Val Arg Thr  Arg Ala Ser
    8300                 8305                 8310

Pro Trp  Ser Ala Thr Ser Ser  Trp Arg Ala Gly Trp  Glu Arg Val
    8315                 8320                 8325

Ala Pro  Pro Arg Ala Trp Lys  Ser Gly Ala Ser Ser  Trp Pro Trp
    8330                 8335                 8340

Ser Trp  Pro Trp Ser Trp Ser  Val Cys Ala Ala Ser  Leu Pro Thr
    8345                 8350                 8355

Arg Arg  Pro Cys Ala Arg Ser  Arg Arg Thr Cys Thr  Thr Ser Ser
    8360                 8365                 8370

Gly Thr  Gly Ser Cys Ala Arg  Pro Ala Arg Ser Pro  Thr Trp Ser
    8375                 8380                 8385
```

```
Pro Thr  Trp Ser Pro Thr Trp  Ala Ser Cys Thr Arg  Thr Ala Trp
    8390                 8395                 8400


Gly Lys  Thr Cys Cys Thr Pro  Pro Cys Ala Gly Arg  Pro Ala Ala
    8405                 8410                 8415


Thr Thr  Ser Ala Thr Ala Ser  Thr Cys Thr Ser Ala  Thr Pro Gly
    8420                 8425                 8430


Arg Arg  Ala Trp Ala Cys Gly  Ser Ser Ala Trp Arg  Ser Arg Thr
    8435                 8440                 8445


Lys Ser  Ser Ala Ser Ser Cys  Arg Arg Thr Ser Arg  Pro Cys Gly
    8450                 8455                 8460


Pro Gly  Ser Thr Ser Val Pro  Pro Pro Arg Thr Trp  Pro Thr Ser
    8465                 8470                 8475


Ser Ser  Pro Ser Ala Cys Gly  Arg Cys Ala Thr Gly  Cys Pro Thr
    8480                 8485                 8490


Leu Ala  Lys Ala Cys Cys Lys  Thr Phe Ala Leu Ser  Ser Ser Asn
    8495                 8500                 8505


Ala Pro  Gly Ser Cys Pro Pro  Pro Ala Pro Arg Cys  Pro Arg Thr
    8510                 8515                 8520


Ser Cys  Arg Pro Ser Ala Ser  Ala Pro Arg Arg Ser  Gly Ala Thr
    8525                 8530                 8535


Ala Thr  Cys Cys Ala Trp Pro  Thr Thr Trp Pro Thr  Thr Arg Thr
    8540                 8545                 8550


Ser Arg  Thr Ser Ala Ala Arg  Val Cys Trp Ser Ala  Thr Ala Ala
    8555                 8560                 8565


Ala Thr  Ser Ala Arg Arg Thr  Ala Pro Trp Pro Ala  Thr Pro Ser
    8570                 8575                 8580
```

```
Cys Ala  Arg Pro Arg Ser Ser  Ala Pro Ser Ser Cys  Lys Ala Pro
    8585                 8590                 8595

Ala Thr  Ala Arg Ala Arg Gly  Val Asn Ser Pro Arg  Gly Cys Gly
    8600                 8605                 8610

Pro Arg  Pro Thr Cys Ala Ser  Ser Cys Pro Arg Thr  Thr Ile Pro
    8615                 8620                 8625

Ser Arg  Ser Gly Ser Thr Arg  Thr Asn Pro Ser Arg  Pro Arg Pro
    8630                 8635                 8640

Ser Cys  Arg Pro Ala Ser Ser  Pro Arg Gly Pro Ser  Trp Pro Asn
    8645                 8650                 8655

Cys Lys  Pro Ser Arg Asn Pro  Ala Lys Asn Phe Cys  Lys Arg Ala
    8660                 8665                 8670

Thr Gly  Ser Thr Trp Thr Pro  Arg Pro Glu Arg Ser  Ser Thr Pro
    8675                 8680                 8685

Ala Ser  Pro Arg Met Pro Arg  Gly Ser Ser Lys Lys  Leu Lys Val
    8690                 8695                 8700

Glu Leu  Pro Pro Pro Glu Asp  Leu Glu Glu Asp Trp  Glu Ser Ser
    8705                 8710                 8715

Gln Ala  Glu Glu Glu Glu Met  Glu Asp Trp Asp Ser  Thr Gln Ala
    8720                 8725                 8730

Glu Glu  Asp Ser Leu Gln Asp  Ser Leu Glu Glu Glu  Asp Glu Val
    8735                 8740                 8745

Glu Glu  Ala Glu Glu Glu Ala  Ala Ala Ala Arg Pro  Ser Ser Ser
    8750                 8755                 8760

Ala Glu  Lys Ala Ser Ser Thr  Asp Thr Ile Ser Ala  Pro Gly Arg
    8765                 8770                 8775
```

```
Gly Arg  Gly Gly Arg Ala His  Ser Arg Trp Asp Glu  Thr Gly Arg
    8780                 8785                 8790

Phe Pro  Asn Pro Thr Thr Gln  Thr Gly Lys Lys Glu  Arg Gln Gly
    8795                 8800                 8805

Tyr Lys  Ser Trp Arg Gly His  Lys Asn Ala Ile Val  Ser Cys Leu
    8810                 8815                 8820

Gln Ala  Cys Gly Gly Asn Ile  Ser Phe Thr Arg Arg  Tyr Leu Leu
    8825                 8830                 8835

Phe His  Arg Gly Val Asn Phe  Pro Arg Asn Ile Leu  His Tyr Tyr
    8840                 8845                 8850

Arg His  Leu His Ser Pro Tyr  Tyr Cys Phe Gln Glu  Glu Ala Glu
    8855                 8860                 8865

Thr Gln  Gln Gln Gln Lys Thr  Ser Gly Ser Ser Ser  Lys Ile His
    8870                 8875                 8880

Ser Gly  Gly Arg Trp Thr Glu  Asp Arg Gly Glu Arg  Ala Gly Ala
    8885                 8890                 8895

Asp Pro  Gly Ala Glu Glu Pro  Asp Leu Ser His Pro  Leu Cys His
    8900                 8905                 8910

Leu Pro  Ala Glu Ser Gly Ala  Gly Ala Gly Thr Glu  Ser Gln Glu
    8915                 8920                 8925

Pro Phe  Ser Ala Leu Ala His  Pro Gln Leu Ser Val  Ser Gln Glu
    8930                 8935                 8940

Arg Arg  Pro Thr Ser Ala His  Ser Arg Gly Arg Arg  Gly Ser Leu
    8945                 8950                 8955

Gln Gln  Val Leu Arg Ala His  Ser Arg Val Ala Arg  Ala Arg Pro
    8960                 8965                 8970
```

```
His Thr  Glu Lys Gly Gly Asn  Tyr Val Thr Thr Cys  Ala Leu Arg
    8975                8980                8985

Pro Thr  Ile Met Ser Lys Glu  Ile Pro Thr Pro Tyr  Met Trp Ser
    8990                8995                9000

Tyr Gln  Pro Gln Met Gly Leu  Ala Ala Gly Ala Ala  Gln Asp Tyr
    9005                9010                9015

Ser Thr  Arg Met Asn Trp Leu  Ser Ala Gly Pro Ala  Met Ile Ser
    9020                9025                9030

Arg Val  Asn Asp Ile Arg Ala  His Arg Asn Gln Ile  Leu Leu Glu
    9035                9040                9045

Gln Ser  Ala Ile Thr Ala Thr  Pro Arg His His Leu  Asn Pro Arg
    9050                9055                9060

Asn Trp  Pro Ala Ala Leu Val  Tyr Gln Glu Ile Pro  Gln Pro Thr
    9065                9070                9075

Thr Val  Leu Leu Pro Arg Asp  Ala Gln Ala Glu Val  Gln Leu Thr
    9080                9085                9090

Asn Ser  Gly Val Gln Leu Ala  Gly Gly Ala Ala Leu  Cys Arg His
    9095                9100                9105

Arg Pro  Ala Gln Gly Ile Lys  Arg Leu Val Ile Arg  Gly Arg Gly
    9110                9115                9120

Thr Gln  Leu Asn Asp Glu Val  Val Ser Ser Ser Leu  Gly Leu Arg
    9125                9130                9135

Pro Asp  Gly Val Phe Gln Leu  Ala Gly Ser Gly Arg  Ser Ser Phe
    9140                9145                9150

Thr Pro  Arg Gln Ala Val Leu  Thr Leu Glu Ser Ser  Ser Ser Gln
    9155                9160                9165
```

```
Pro Arg  Ser Gly Gly Ile Gly  Thr Leu Gln Phe Val  Glu Glu Phe
    9170                 9175                 9180


Thr Pro  Ser Val Tyr Phe Asn  Pro Phe Ser Gly Ser  Pro Gly His
    9185                 9190                 9195


Tyr Pro  Asp Glu Phe Ile Pro  Asn Phe Asp Ala Ile  Ser Glu Ser
    9200                 9205                 9210


Val Asp  Gly Tyr Asp Met Ser  His Gly Gly Ala Ala  Asp Leu Ala
    9215                 9220                 9225


Arg Leu  Arg His Leu Asp His  Cys Arg Arg Phe Arg  Cys Phe Ala
    9230                 9235                 9240


Arg Asp  Leu Ala Glu Phe Ala  Tyr Phe Glu Leu Pro  Glu Glu His
    9245                 9250                 9255


Pro Gln  Gly Pro Ala His Gly  Val Arg Ile Ile Val  Glu Gly Gly
    9260                 9265                 9270


Leu Asp  Ser His Leu Leu Arg  Ile Phe Ser Gln Arg  Pro Ile Leu
    9275                 9280                 9285


Val Glu  Arg Glu Gln Gly Gln  Thr Leu Leu Thr Leu  Tyr Cys Ile
    9290                 9295                 9300


Cys Asn  His Pro Gly Leu His  Glu Ser Leu Cys Cys  Leu Leu Cys
    9305                 9310                 9315


Thr Glu  Tyr Asn Lys Ser Asp  Gln Arg Leu Leu Arg  Thr Arg Leu
    9320                 9325                 9330


Trp Cys  Ser Cys Tyr Gln Pro  Val Pro Val Leu His  Arg Glu Arg
    9335                 9340                 9345


Asp Arg  Ala Pro Ala Pro Val  Ala Pro Gln Glu Val  Pro His Leu
    9350                 9355                 9360
```

```
Ala Val  Pro Gly Leu Pro Asp  Arg Arg Cys Gln Pro  Leu Arg Gln
    9365                 9370                 9375


Arg Arg  Ser Pro Ala Glu Arg  Pro Cys Gln Pro Tyr  Phe Phe His
    9380                 9385                 9390


Pro Gln  Lys Gln Ala Pro Ala  Leu Pro Thr Leu Pro  Pro Arg Asp
    9395                 9400                 9405


Leu Ser  Val Arg Leu Arg Thr  Leu Pro Ser His Leu  Pro Pro Asp
    9410                 9415                 9420


Pro Glu  Tyr His Ser Ala Ala  Pro Arg Tyr Gln Pro  Asn Tyr Pro
    9425                 9430                 9435


Pro Thr  Pro Pro Ser Arg Pro  Phe Leu Ile Tyr His  Tyr Arg Arg
    9440                 9445                 9450


Trp Leu  Leu Leu Leu Val Leu  Pro Arg Pro Val Asp  Pro Arg Ser
    9455                 9460                 9465


Pro Thr  Gln Ser Pro Glu Glu  Val Arg Lys Cys Lys  Phe Gln Glu
    9470                 9475                 9480


Pro Trp  Lys Phe Leu Lys Cys  Tyr Arg Gln Lys Ser  Asp Met His
    9485                 9490                 9495


Pro Ser  Trp Ile Met Ile Ile  Gly Ile Val Asn Ile  Leu Ala Cys
    9500                 9505                 9510


Thr Leu  Ile Ser Phe Val Ile  Tyr Pro Cys Phe Asp  Phe Gly Trp
    9515                 9520                 9525


Asn Ser  Pro Glu Ala Leu Tyr  Leu Pro Pro Glu Pro  Asp Thr Pro
    9530                 9535                 9540


Pro Gln  Gln Gln Pro Gln Ala  His Ala Leu Pro Pro  Pro Gln Pro
    9545                 9550                 9555
```

```
Arg Pro  Gln Tyr Met Pro Ile  Leu Asp Tyr Glu Ala  Glu Pro Gln
    9560                 9565                 9570

Arg Pro  Met Leu Pro Ala Ile  Ser Tyr Phe Asn Leu  Thr Gly Gly
    9575                 9580                 9585

Asp Asp  Pro Thr Gly Gln Gln  Arg Gln Arg Pro Ser  Pro Gly His
    9590                 9595                 9600

Gly Arg  Pro Arg Leu Gly Ala  Ala Thr Arg Pro Thr  Ser His Ser
    9605                 9610                 9615

Ser Ala  Ala Gly Glu Ser Arg  Gln Gly Ala Ala Gly  Arg His Ser
    9620                 9625                 9630

His Pro  Pro Val Gln Glu Arg  His Leu Leu Pro Gly  Glu Thr Gly
    9635                 9640                 9645

Gln Asp  Leu Leu Arg Gly His  Pro Asp Arg Pro Ser  Pro Leu Leu
    9650                 9655                 9660

Arg Ala  Pro Ala Ala Ala Pro  Glu Val His Leu Pro  Gly Arg Ser
    9665                 9670                 9675

Gln Pro  His Arg His His Pro  Ala Val Gly Arg Tyr  Gln Gly Val
    9680                 9685                 9690

His Pro  Leu Leu Leu Arg Leu  Pro Arg Leu Arg Pro  His Ser Asp
    9695                 9700                 9705

Gln Asp  Pro Leu Arg Pro Pro  Arg Pro Pro Pro His  Glu Leu Ile
    9710                 9715                 9720

Thr Pro  Leu Ser Ser Glu Ile  Lys Ile Ile Leu Met  Met Ile Ile
    9725                 9730                 9735

Lys Lys  Ile Ile Ile Phe Glu  Ile Lys Ile Gln Ser  Tyr Phe Glu
    9740                 9745                 9750
```

```
Phe Asn  Lys Asn Lys Glu Ser  Leu Thr Asn Leu Ile  Pro Gly Leu
    9755                 9760                 9765


Cys Pro  Cys Phe Leu Pro Thr  Pro Pro His Ser Pro  Leu Pro Ser
    9770                 9775                 9780


Ser Gly  Thr Ala Gly Pro Gly  Gly Leu Gln Thr Ser  Ser Thr Arg
    9785                 9790                 9795


Arg Gly  Cys Gln Ile Pro Pro  Val Pro Gln Ser Ser  Phe Tyr Leu
    9800                 9805                 9810


Leu Ser  Asp Val Gln Lys Ala  Arg Pro Gly Gly Leu  Arg Pro Arg
    9815                 9820                 9825


Leu Pro  Leu Arg Cys Arg Gln  Arg Thr Asp Arg Ala  Leu His Gln
    9830                 9835                 9840


Pro Pro  Leu Arg Leu Phe Arg  Trp Ile Pro Arg Glu  Ala Pro Gly
    9845                 9850                 9855


Gly Val  Val Pro Ala Thr Gly  Pro Arg His His Gln  Glu Arg Gly
    9860                 9865                 9870


Asn His  Pro Gln Ala Gly Arg  Gly Gly Gly Pro Arg  Leu Val Gly
    9875                 9880                 9885


Lys Thr  His Leu Gln His Gly  His Gln Gly Arg Arg  Pro Ser Gln
    9890                 9895                 9900


Tyr Phe  Lys Gln His His Phe  Pro Asn Cys Cys Pro  Phe Leu Gln
    9905                 9910                 9915


Gln Gln  Trp Asn Phe Lys Pro  Gln Cys Leu His Thr  Ile Ser Ser
    9920                 9925                 9930


Ile Ser  His Ile His Phe Arg  His Lys Ser Trp Lys  Arg Ser Ser
    9935                 9940                 9945
```

```
Asp Phe  Lys Val Val Asp Cys  Thr Thr Asn Ser Ser  Ser Tyr Ile
    9950                9955                9960


Gln Leu  Lys His His Ser Lys  Asn Arg Gln Arg Ala  Ile Tyr Leu
    9965                9970                9975


Gln Trp  Lys Gln Arg Thr Gly  Tyr Lys Pro Lys Lys  Arg Thr Ser
    9980                9985                9990


Phe Arg  Cys Tyr Cys Asn Ile   Tyr Trp Lys Trp Leu   Arg Leu Trp
    9995                10000                10005


Ile Leu   Trp Lys Asn Lys Thr   Arg Asn Tyr Gln Asn   Trp Ser Arg
    10010                10015                10020


Ile Lys   Phe Cys Gln Ser Asn   Ser Cys Gln Thr Arg   His Arg Phe
    10025                10030                10035


Lys Phe   Leu Arg Trp Cys Leu   Asp Ser Trp Lys Gln   Thr Gly Gln
    10040                10045                10050


Ala Asn   Thr Leu Asp Tyr Pro   Pro Lys Pro Leu Ser   Ile Thr Phe
    10055                10060                10065


Arg Gln   Arg Cys Gln Ile Tyr   Ser Leu Ser Tyr Lys   Met Arg Ser
    10070                10075                10080


Asn Thr   Arg His Cys Gly Ser   Gly Gly Cys Tyr Cys   Arg Ile Ser
    10085                10090                10095


Thr Lys   Ser Asn His Ser Gln   Lys Arg His Ser Phe   Pro Ile Phe
    10100                10105                10110


Arg Trp   Cys Thr His Val Lys   Leu Ile Asn Gly Arg   Leu Leu Glu
    10115                10120                10125


Leu Gly   Gly Thr Asp His Ser   Lys Cys Ser Leu Tyr   Lys Cys Cys
    10130                10135                10140
```

```
Gly Ile   His Ala Lys Tyr Arg   Cys Ile Ser Lys Asn   Pro Lys Asn
    10145                10150                10155

Thr Lys   His Ser Gln Ser Gly   Ile Phe Asn Trp Arg   Asn Tyr Tyr
    10160                10165                10170

Ala Asn   Asp Thr Asn His Asn   Phe Gln Trp His Lys   Arg His Asn
    10175                10180                10185

Pro Ser   His Leu Leu Tyr Asp   Phe Tyr Met Ala Val   Asp Trp Arg
    10190                10195                10200

Leu Gly   Gln Lys Tyr Tyr Leu   Cys Tyr Gln Leu Ile   Leu Phe Phe
    10205                10210                10215

Leu His   Arg Pro Gly Ile Ile   Pro Pro Ser Lys Pro   Thr Pro Phe
    10220                10225                10230

Pro Thr   Thr Phe Val Tyr Met   Glu Thr Leu Lys Gln   Lys Asn Lys
    10235                10240                10245

Val Gln   Val Phe Tyr Ile Asn   Ser Phe Thr Gly Leu   Glu Gln Leu
    10250                10255                10260

Phe Phe   Leu His Pro Pro Arg   Thr Trp Asn Thr Pro   Pro Ser Pro
    10265                10270                10275

Pro Ala   Gln Pro Thr Ser Glu   Cys His Trp Trp Thr   Cys Phe Trp
    10280                10285                10290

Ser Pro   Arg Ser Thr Gln Phe   Gln Ser Glu Pro Val   Ser Asp Arg
    10295                10300                10305

Ser Gly   Arg Asn Pro Pro Gly   Thr Pro Ala Ser Ala   Pro His Ser
    10310                10315                10320

Ser Thr   Ala Glu Asp Cys Pro   Arg Trp Ser Gly Ser   Arg Leu Ser
    10325                10330                10335
```

```
Gly Arg   Ser Arg Arg Ala Ala   Val Gly Ile Ile Val   Arg Glu Arg
    10340                10345                10350

Asp Arg   Pro Val Val Ser His   Gln Ala Pro Gln Gln   Ser Leu Pro
    10355                10360                10365

Pro Pro   Leu Arg Gln Ala Ala   Ala Gln Gly Val Arg   Val Gln Gly
    10370                10375                10380

Leu Pro   Gln His Asp Ala His   Gly Pro Gln His Gln   Ser Ser Gly
    10385                10390                10395

Ala Ala   Gly Ala Ala Ala His   Ala Asn Leu Ala Gln   Val Thr Ala
    10400                10405                10410

Val Arg   Ala Thr Gln Asp His   Gln Val Val Gln Gln   Ser Ile Val
    10415                10420                10425

Gln His   Ala Pro Ala Glu Thr   His Arg Gly Lys Asp   Ala Thr His
    10430                10435                10440

Val Ala   Val Val Pro Asp Pro   Gln Val Asn Gln Val   Ala Leu Pro
    10445                10450                10455

Pro Glu   Asp Ala Ala His Val   His Asp Leu Leu Gly   His Val Ala
    10460                10465                10470

Val His   His Leu Pro Val Pro   His His Pro Leu Val   Glu His Ala
    10475                10480                10485

Ala Pro   Asp Asp Pro Ala Glu   Pro Gln Gly Gln His   Arg Pro Ala
    10490                10495                10500

Arg His   Ala Ala Lys Arg Pro   Arg Ile Pro Ala Met   Thr Met Glu
    10505                10510                10515

Asp Pro   Pro Leu Val Pro Val   Asp His Leu Gly Ala   Glu Gln Val
    10520                10525                10530
```

```
Tyr Val   Gly Thr Ala Gln Ala   Tyr Ala His Ala Ser   Leu Gln His
    10535                 10540                 10545


Ser Gln   Leu Leu Gly Gly Gln   Asn His Ile Pro Gly   His Gly Glu
    10550                 10555                 10560


Leu Leu   Gln Asp Ser Glu Pro   Arg Arg Thr Gly Gln   Ser Ser His
    10565                 10570                 10575


Ile Thr   Tyr Ile Val His Gly   Gln Gly Ile Ala Ile   Arg Gln His
    10580                 10585                 10590


Arg Val   Ile Leu His Gln Arg   Ser Ala Gly Leu Gly   Leu Leu Thr
    10595                 10600                 10605


Ala Trp   Gly Gly Arg Pro Ile   Arg Val Met Ala Gly   Arg Gly Ser
    10610                 10615                 10620


Cys Ser   Arg Pro Cys His Asp   Ala Val Ala Phe Gly   His Phe Arg
    10625                 10630                 10635


Thr Cys   Cys Ser Arg Thr Trp   Ser Gly Arg Cys Thr   Pro Ile Ala
    10640                 10645                 10650


Gly Gly   Gly Leu Gly Ala Trp   Asn Ala Arg Cys Ser   Cys Lys Thr
    10655                 10660                 10665


Ala Thr   Leu Ser Asp Arg Ala   Ala Asp Leu Gly Pro   Gln Glu Arg
    10670                 10675                 10680


Ser His   His Ala Leu Ser His   Arg Pro Pro Trp Asn   Gly Pro Gly
    10685                 10690                 10695


Pro Ala   Arg Cys Asn Phe Val   Gly Phe Arg Arg Arg   Gly Arg Glu
    10700                 10705                 10710


Glu Gln   Glu Glu Pro Leu Thr   Phe Asn Pro Asn Gly   Leu Gly Ala
    10715                 10720                 10725
```

```
Leu Gln   Asn Glu Gly His Gly   Asp Gly Thr Ser Arg   Pro Arg Cys
    10730                 10735                 10740


Val Gly   Gly Lys Gln Pro Gly   Gln Arg Tyr Gly Ser   Arg Asp Val
    10745                 10750                 10755


Pro Arg   Trp Leu Pro Ala Lys   Pro Pro Arg Ala His   Pro Glu Thr
    10760                 10765                 10770


Arg Gln   Arg Lys Arg Glu Gly   Ser Leu Ile Pro Gln   Pro Ser Cys
    10775                 10780                 10785


Tyr Thr   Pro Ala Pro Ser Pro   Asp Asn Phe His Phe   Ser Ser Leu
    10790                 10795                 10800


Glu Phe   Glu Leu Val Pro Glu   Val Asn Pro Ser Gln   Pro Lys Ala
    10805                 10810                 10815


Arg Ala   Glu His Pro Pro Pro   Ala Phe Leu Ser Thr   Pro Ser Phe
    10820                 10825                 10830


Gln Asp   Ile Leu Leu Leu Val   His Leu Gln Gln Ile   Asp Lys Arg
    10835                 10840                 10845


Asn Ile   Lys Ile Ser Ala Ala   Ile Pro Glu Leu Leu   Pro Gln Gln
    10850                 10855                 10860


Leu Val   Leu Phe His Ile Val   Ser Glu Ile Phe Ser   His Arg Thr
    10865                 10870                 10875


Pro Arg   Asn Lys Arg Arg Ala   Ser His Ile Thr Asp   Lys Pro Lys
    10880                 10885                 10890


Ser Pro   Pro Val Ser Ile Ala   Lys Cys Lys Ile Glu   Ile Ser Met
    10895                 10900                 10905


Leu Ala   Arg Pro Gly Asp Ile   Phe Gln Ile Thr Gly   Gln Lys Ile
    10910                 10915                 10920
```

```
Gly Ala   Ile Phe Lys Lys Ile   Asn Lys Arg Lys Ile   Phe Gln Val
    10925                 10930                 10935


His Val   Gly Leu Gly Asn Asn   Asp Gly Val Ser Ala   Arg Gly Ala
    10940                 10945                 10950


Phe Gln   His Gly Leu Ala Asp   Leu Lys Asn Lys Lys   Asn Ile Lys
    10955                 10960                 10965


Pro Cys   Pro Gly Glu Gln Val   Gly Lys Ser Phe Ser   Pro Ala Pro
    10970                 10975                 10980


Gly Arg   Pro Arg Gly Leu Arg   Arg Asp Pro Arg Lys   Asn Cys Arg
    10985                 10990                 10995


Tyr Asp   Lys Pro Ser Gln Arg   Asp Val Pro Gly Gly   Arg Arg Glu
    11000                 11005                 11010


Phe Glu   Lys Lys His Thr Pro   Pro Glu His Trp Ser   Pro Val Lys
    11015                 11020                 11025


Lys Ser   Gly Arg Gly Ser Asn   Glu Ala Leu Gln Arg   Ser Leu Ser
    11030                 11035                 11040


Ser Pro   Ala Lys Arg Cys His   Ala Asp Glu Ala Gln   Asn Phe Gln
    11045                 11050                 11055


Val Arg   Lys Lys Cys Asn Tyr   Ser Pro Pro Ala Gln   Ala Ala Lys
    11060                 11065                 11070


Leu Pro   Ile Pro Pro Asp Thr   His Thr Lys Pro Gln   Arg Pro Leu
    11075                 11080                 11085


Thr Glu   Arg Gln Gln Gln Arg   His Thr Thr Gly Ala   Arg Val Arg
    11090                 11095                 11100


Glu Lys   Thr Glu Leu Pro Val   Arg Pro Leu Ser Ala   Gln Tyr Ile
    11105                 11110                 11115
```

```
Ala Pro   Asp Leu His Arg Lys   Gly Gln Ser Leu Lys   Ile Pro Ala
    11120                11125                11130


Lys Ser   His Thr Pro Ser Thr   Arg Pro Glu Thr Gly   Asp Thr Leu
    11135                11140                11145


Arg Lys   Ile Arg Ala Leu Pro   Gln Thr Ala Lys Leu   Pro Ser Phe
    11150                11155                11160


Pro Gly   Ser His Ala Thr Ser   Ser Lys His Asp Phe   Gln Ile Pro
    11165                11170                11175


Ser Thr   Val Lys Asn Ile Thr   Arg Pro Ala Pro Asn   Gly Arg Arg
    11180                11185                11190


Ser Arg   Ser Gln Ser Pro Ser   Ser Leu Pro Lys Phe   Lys Gln Leu
    11195                11200                11205


Ile Cys   Ile Leu Thr Arg Thr   Lys Ser Leu Arg Tyr   Ile Ile Asp
    11210                11215                11220


Asp
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<222> (2011)..(2011)
<223> Xaa can be any naturally occurring amino acid

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

Gly Arg Gly Gly Arg Phe Asp Asp Val Ala Val Arg Arg Ser Arg Phe
        35                  40                  45

Ala Ser Ser Arg Gly Lys Ser Asp Val Lys Arg Gly Val Val Thr Arg
    50                  55                  60

Lys Tyr Ser Ile Phe Pro Arg Ser Leu Thr Gly Asn Glu Val Phe Leu
65                  70                  75                  80

Gly Gly Cys Lys Lys Arg Ala Ile Phe Ala Arg Lys Leu Asn Glu Glu
                85                  90                  95

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

Gly Arg Val Asp Phe Asp Arg Leu Arg Gly Gly Phe Asp Tyr Arg Ile
        115                 120                 125

Phe His Leu Asn Phe Arg Val Arg Cys Gln Ser Pro Val Phe Leu Arg
    130                 135                 140

Thr Ile Ser Phe Pro Arg Lys Cys His Leu Thr Val Thr Ile Thr Val
145                 150                 155                 160

Leu Arg Arg Lys Leu Arg Ser Pro Asp Pro Leu Trp Cys Thr Leu Ser
                165                 170                 175

Thr Ile Cys Ser Asp Ala Ala Leu Ser Gln Tyr Leu Leu Pro Ala Cys
            180                 185                 190

Val Leu Glu Val Ala Glu Cys Ala Ser Lys Ile Ala Thr Thr Arg Gln
        195                 200                 205

Gly Leu Thr Asp Asn Cys Met Lys Asn Leu Leu Arg Val Arg Arg Phe
    210                 215                 220
```

```
Ala Leu Leu Arg Asp Val Arg Ala Arg Tyr Thr Arg His Leu Leu Thr
225                 230                 235                 240


Ser Met Pro Ser Thr Pro Pro Ile Asp Val Asn Asp Gly Lys Trp Pro
                245                 250                 255


Ala Trp His Tyr Ala Gln Tyr Met Thr Leu Trp Asp Phe Pro Thr Trp
            260                 265                 270


Gln Tyr Ile Tyr Val Leu Val Ile Ala Ile Thr Met Val Met Arg Phe
        275                 280                 285


Trp Gln Tyr Ile Asn Gly Arg Gly Arg Phe Asp Ser Arg Gly Phe Pro
    290                 295                 300


Ser Leu His Pro Ile Asp Val Asn Gly Ser Leu Phe Trp His Gln Asn
305                 310                 315                 320


Gln Arg Asp Phe Pro Lys Cys Arg Asn Asn Ser Ala Pro Leu Thr Gln
                325                 330                 335


Met Gly Gly Arg Arg Val Arg Trp Glu Val Tyr Ile Ser Arg Ala Arg
            340                 345                 350


Leu Val Asn Arg Gln Ile Thr Arg Ser Phe Ile Ala Val Val Tyr His
        355                 360                 365


Ser Ile Ala Asn Ala Val Ser Ala Ser Asp Thr Thr Val Ser Asn Leu
    370                 375                 380


Arg Leu Glu Tyr Leu Ile Arg Leu Thr Ile Gly Leu Arg Leu Glu Phe
385                 390                 395                 400


Asp Ala Thr Met Arg Val Met Gly Ile Leu Arg Ser Tyr Gln Gln Trp
                405                 410                 415


Trp Ile Trp Gly Ile Leu Gly Phe Trp Met Leu Met Ile Cys Asn Val
            420                 425                 430
```

```
Trp Gly Asn Leu Trp Val Thr Val Tyr Tyr Gly Val Pro Val Trp Lys
        435                 440                 445

Glu Ala Lys Thr Thr Leu Phe Cys Ala Ser Asp Ala Lys Ala His Lys
    450                 455                 460

Glu Glu Val His Asn Ile Trp Ala Thr His Ala Cys Val Pro Thr Asp
465                 470                 475                 480

Pro Asn Pro Gln Glu Ile Val Leu Lys Asn Val Thr Glu Asn Phe Asn
                485                 490                 495

Met Trp Lys Asn Asp Met Val Asp Gln Met His Glu Asp Ile Ile Ser
            500                 505                 510

Leu Trp Asp Gln Ser Leu Lys Pro Cys Val Lys Leu Thr Pro Leu Cys
        515                 520                 525

Val Thr Leu Asn Cys Ser Asp Val Lys Ile Lys Gly Thr Asn Ala Thr
    530                 535                 540

Tyr Asn Asn Ala Thr Tyr Asn Asn Asn Asn Thr Ile Ser Asp Met Lys
545                 550                 555                 560

Asn Cys Ser Phe Asn Thr Thr Thr Glu Ile Thr Asp Lys Lys Lys Lys
                565                 570                 575

Glu Tyr Ala Leu Phe Tyr Lys Leu Asp Val Val Ala Leu Asp Gly Lys
            580                 585                 590

Glu Thr Asn Ser Thr Asn Ser Ser Glu Tyr Arg Leu Ile Asn Cys Asn
        595                 600                 605

Thr Ser Ala Val Thr Gln Ala Cys Pro Lys Val Ser Phe Asp Pro Ile
    610                 615                 620

Pro Ile His Tyr Cys Ala Pro Ala Gly Tyr Ala Ile Leu Lys Cys Asn
625                 630                 635                 640
```

```
Asn Lys Thr Phe Asn Gly Thr Gly Pro Cys Asn Asn Val Ser Thr Val
                645                 650                 655

Gln Cys Thr His Gly Ile Lys Pro Val Val Ser Thr Gln Leu Leu Leu
            660                 665                 670

Asn Gly Ser Leu Ala Glu Glu Glu Val Val Ile Arg Phe Glu Asn Leu
        675                 680                 685

Thr Asn Asn Ala Lys Ile Ile Ile Val His Leu Asn Glu Ser Val Glu
    690                 695                 700

Ile Asn Cys Thr Arg Pro Ser Asn Asn Thr Arg Lys Ser Val Arg Ile
705                 710                 715                 720

Gly Pro Gly Gln Thr Phe Phe Ala Thr Gly Asp Ile Ile Gly Asp Ile
                725                 730                 735

Arg Gln Ala His Cys Asn Ile Ser Arg Lys Lys Trp Asn Thr Thr Leu
            740                 745                 750

Gln Arg Val Lys Glu Lys Leu Lys Glu Lys Phe Pro Asn Lys Thr Ile
        755                 760                 765

Gln Phe Ala Pro Ser Ser Gly Gly Asp Leu Glu Ile Thr Thr His Ser
    770                 775                 780

Phe Asn Cys Arg Gly Glu Phe Phe Tyr Cys Tyr Thr Ser Asp Leu Phe
785                 790                 795                 800

Asn Ser Thr Tyr Met Ser Asn Asn Thr Gly Gly Ala Asn Ile Thr Leu
                805                 810                 815

Gln Cys Arg Ile Lys Gln Ile Ile Arg Met Trp Gln Gly Val Gly Gln
            820                 825                 830

Ala Met Tyr Ala Pro Pro Ile Ala Gly Asn Ile Thr Cys Lys Ser Asn
        835                 840                 845
```

```
Ile Thr Gly Leu Leu Leu Thr Arg Asp Gly Gly Lys Glu Lys Asn Asp
    850                 855                 860

Thr Glu Thr Phe Arg Pro Gly Gly Gly Asp Met Arg Asp Asn Trp Arg
865                 870                 875                 880

Ser Glu Leu Tyr Lys Tyr Lys Val Val Glu Ile Lys Pro Leu Gly Ile
                885                 890                 895

Ala Pro Asp Lys Ala Lys Arg Arg Val Val Glu Arg Glu Lys Arg Ala
            900                 905                 910

Val Gly Ile Gly Ala Val Phe Leu Gly Phe Leu Gly Ala Ala Gly Ser
        915                 920                 925

Thr Met Gly Ala Ala Ser Met Thr Leu Thr Val Gln Ala Arg Gln Leu
    930                 935                 940

Leu Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala Ile Glu
945                 950                 955                 960

Ala Gln Gln His Met Leu Gln Leu Thr Val Trp Gly Ile Lys Gln Leu
                965                 970                 975

Gln Thr Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln Gln Leu
            980                 985                 990

Leu Gly Ile Trp Gly Cys Ser Gly  Lys Leu Ile Cys Thr  Thr Ala Val
        995                 1000                1005

Pro Trp  Asn Ala Ser Trp Ser  Asn Lys Ser Tyr Glu  Glu Ile Trp
    1010                1015                1020

Gly Asn  Met Thr Trp Met Gln  Trp Asp Arg Glu Ile  Asn Asn Tyr
    1025                1030                1035

Thr Asn  Thr Ile Tyr Ser Leu  Leu Glu Glu Ser Gln  Asn Gln Gln
    1040                1045                1050
```

```
Glu Lys  Asn Glu Lys Asp Leu  Leu Ala Leu Asp Ser  Trp Glu Ser
    1055                1060                1065


Leu Trp  Ser Trp Phe Asn Ile  Thr Asn Trp Leu Trp  Tyr Ile Arg
    1070                1075                1080


Ile Phe  Ile Ile Ile Val Gly  Gly Leu Ile Gly Leu  Arg Ile Ile
    1085                1090                1095


Phe Ala  Val Leu Ser Ile Val  Asn Arg Val Arg Gln  Gly Tyr Ser
    1100                1105                1110


Pro Leu  Ser Phe Gln Thr Leu  Thr Pro Ser Pro Arg  Glu Pro Asp
    1115                1120                1125


Arg Leu  Gly Arg Ile Glu Glu  Glu Gly Gly Glu Gln  Asp Arg Ala
    1130                1135                1140


Arg Ser  Val Arg Leu Val Asn  Gly Phe Leu Ala Leu  Ala Trp Glu
    1145                1150                1155


Asp Leu  Arg Ser Leu Cys Leu  Phe Ser Tyr His Arg  Leu Arg Asp
    1160                1165                1170


Leu Ile  Leu Ile Ala Ala Arg  Ala Ala Ala Leu Leu  Gly Arg Ser
    1175                1180                1185


Ser Leu  Trp Gly Leu Gln Lys  Gly Trp Glu Ala Leu  Lys Tyr Leu
    1190                1195                1200


Gly Ser  Leu Val Gln Tyr Trp  Gly Leu Glu Leu Lys  Lys Ser Ala
    1205                1210                1215


Ile Ser  Leu Phe Asp Ala Ile  Ala Ile Thr Val Ala  Glu Gly Thr
    1220                1225                1230


Asp Arg  Ile Ile Asn Ile Val  Gln Arg Ile Ser Arg  Ala Phe Tyr
    1235                1240                1245
```

```
Asn Ile  Pro Arg Arg Ile Arg  Gln Gly Phe Glu Ala  Thr Leu Gln
    1250                1255                1260


Gly Thr  Ser Arg Val Asp Pro  Gly Gly Gln Thr Ala  Asp Gln Pro
    1265                1270                1275


Arg Leu  Cys Leu Leu Val Ala  Ser His Leu Leu Phe  Ala Pro Pro
    1280                1285                1290


Pro Cys  Leu Pro Pro Trp Lys  Val Pro Leu Pro Leu  Ser Phe Pro
    1295                1300                1305


Asn Lys  Met Arg Lys Leu His  Arg Ile Val Val Gly  Val Ile Leu
    1310                1315                1320


Phe Trp  Gly Val Gly Trp Gly  Arg Thr Ala Arg Gly  Arg Ile Gly
    1325                1330                1335


Lys Thr  Ile Ala Gly Met Leu  Gly Met Arg Trp Ala  Leu Trp Leu
    1340                1345                1350


Leu Arg  Arg Lys Glu Pro Ala  Asp Leu Gln Ile Ile  His Leu Cys
    1355                1360                1365


Arg Val  Arg Arg Lys Arg Asn  Gly Ile Met Gly Ile  Met Gly Leu
    1370                1375                1380


His Ile  Gly Gln Ile Ser Ile  Cys Trp Pro Pro Cys  Met Pro Arg
    1385                1390                1395


Thr Pro  Ala Arg His Gly Pro  Ser Ser Ser Thr Thr  Ser Pro Asp
    1400                1405                1410


Ala Met  Cys Thr Trp Gly Pro  Ala Glu Ala Cys Ser  Cys Pro Thr
    1415                1420                1425


Ser Ala  Thr Cys Asn Leu Arg  Cys Cys Trp Ser Pro  Met Pro Cys
    1430                1435                1440
```

```
Pro Glu  Ala Arg Gly Cys Leu  Thr Met Trp Ser Cys  Gly Lys Phe
    1445                1450                1455


Asp Met  Met Asn Pro Arg Pro  Gly Ala Gly Pro Ala  Asn Ala Glu
    1460                1465                1470


Ala Ser  Thr Pro Gly Phe Ser  Pro Cys Val Trp Arg  Arg Arg Thr
    1475                1480                1485


Cys Asp  Pro Ile Ile Trp Cys  Cys Pro Ala Thr Gly  Arg Ser Ser
    1490                1495                1500


Ala Pro  Ala Gly Lys Asn Leu  Thr Arg Val Ser Ser  Val Trp Gly
    1505                1510                1515


Arg Trp  Arg Ala Cys Met Arg  Gly Arg Met Thr Lys  Ile Cys Val
    1520                1525                1530


Phe Leu  Cys Val Ala Ala Ala  Ala Glu Ala Pro Pro  Leu Arg Glu
    1535                1540                1545


Gly Tyr  Ser Ala Leu Ile Arg  Gly Val Ser Pro Pro  Gly Arg Glu
    1550                1555                1560


Cys Val  Arg Met Trp Asp Pro  Arg Trp Thr Ala Gly  Pro Cys Ser
    1565                1570                1575


Pro Arg  Thr Leu Gln Pro Pro  Thr Arg Pro Ala Pro  Arg Pro Trp
    1580                1585                1590


Thr Gln  Leu Pro Pro Gln Leu  Leu Leu Pro Pro Pro  Ala Pro Cys
    1595                1600                1605


Ala Glu  Trp Pro Trp Ala Pro  Ala Thr Thr Ala Leu  Trp Trp Pro
    1610                1615                1620


Thr Arg  Leu Pro Pro Ile Ile  Pro Pro Ala Thr Arg  Arg Ser Cys
    1625                1630                1635
```

```
Cys Cys  Trp Pro Ser Ser Arg  Pro Pro Ser Ala Trp  Ala Ser Pro
    1640                1645                1650

Ser Arg  Trp Leu Ser Cys Arg  Arg Arg Arg Gly Pro  Arg Leu Pro
    1655                1660                1665

Arg Lys  Pro Asn Lys Lys Ile  Asn Lys Thr Glu Thr  Val Val Asp
    1670                1675                1680

Phe Asn  Thr Glu Ser Ile Phe  Ile Phe Phe Ala Arg  Gly Arg Pro
    1685                1690                1695

Trp Thr  Thr Gly Leu Asp His  Ala Pro Gly Gly Phe  Phe Pro Gly
    1700                1705                1710

Pro Gly  Arg Gly Gly Leu Gly  Cys Gly Thr Trp Ala  Ala Arg Pro
    1715                1720                1725

Gly Gly  Gly Gly Ser Ser Ile  Ala Gly Pro Arg Ala  Arg Gly Trp
    1730                1735                1740

Cys Cys  Lys Ser Pro Ser His  Ser Arg Gly Ala Gly  Arg Gly Ala
    1745                1750                1755

Ala Arg  Cys Pro Gly Gly Asp  Trp Pro Arg Ala Ala  Pro Trp Cys
    1760                1765                1770

Arg Cys  Arg Thr Cys Ala Gly  Arg Asp Ala Cys Gly  Gly Arg Asp
    1775                1780                1785

Ala Ser  Trp Pro Gly Ser Asp  Trp Arg Cys Ser Arg  Pro Asp Pro
    1790                1795                1800

Ala Gly  Gly Ser Cys Cys Ala  Gly Pro Pro Ala Arg  Cys Ile Arg
    1805                1810                1815

Arg Thr  Trp Gly Ile Cys His  Ala Thr Trp Lys Gly  Arg Arg Glu
    1820                1825                1830
```

```
Arg Ile  Trp Arg Arg Pro Cys  Asp Arg Pro Gly Phe  Pro Cys Thr
    1835                 1840                 1845


His Pro  Trp Arg Trp Ala Arg  Gly Arg Arg Pro Gly  Gln Arg Arg
    1850                 1855                 1860


Phe Gly  Gly Arg Thr His Arg  Ser Cys Gly Pro Gly  Ala Arg His
    1865                 1870                 1875


Arg Pro  Phe Ile Trp Gly Gly  Gly Cys Pro Thr Gly  Gly Arg Arg
    1880                 1885                 1890


Cys Pro  Arg Ser Arg Gly Arg  Ser Cys Pro Arg Arg  Ser Ala Ser
    1895                 1900                 1905


Pro Arg  Pro Ala Arg Arg Gly  Gly Ser Cys Pro Pro  Ala Gly Arg
    1910                 1915                 1920


Lys Lys  Arg Phe Pro Gly Arg  Gly Arg Ala Gly Pro  Lys Ala Gly
    1925                 1930                 1935


Ser Gly  Ala Ala Gly Thr Cys  Arg Ser Arg Trp Gly  Arg Arg Pro
    1940                 1945                 1950


Arg Pro  Ala Ala Gly Gly Ser  Gly Arg Asp Ser Cys  Arg Pro Arg
    1955                 1960                 1965


Gly Gly  Gly Gly Pro Pro Arg  Ser Ser Ser Arg Ala  His Ala Cys
    1970                 1975                 1980


Ser Arg  Ala Arg Val Pro Pro  Gly Gly Ala Arg Pro  Pro Ala Arg
    1985                 1990                 1995


Gly Ala  Leu Ala Ala Arg Arg  Ser Phe Ser Ala Ala  Xaa Arg Arg
    2000                 2005                 2010


Pro Trp  Ala Phe Trp Arg Gly  Ser Val Ala Arg Val  Pro Asp Gly
    2015                 2020                 2025
```

```
Pro Arg  Ala Arg Cys Ala Leu  Gly His Leu Asp Pro  Ala Asp Leu
    2030                2035                2040


Leu Val  Ser Arg Val Gly Ala  Thr Ala Gly Val Gly  His Gln Ala
    2045                2050                2055


Met Gly  Val Gln Arg Gly Gln  Gly Pro Val Leu Pro  Gly Ser Gln
    2060                2065                2070


Gly Pro  Arg Gln Arg Gly Leu  Arg His Gly Glu Gly  Val Arg Ala
    2075                2080                2085


Gly Leu  Gly Ala Cys Glu Gly  Ala Leu Gln Ala His  Pro Ala Gly
    2090                2095                2100


Arg Glu  Pro Leu Pro Val Gly  Ala Leu Arg Val Gly  Gln Val Ala
    2105                2110                2115


Ile Glu  His Glu Phe Val Val  Glu Arg Leu Gly Arg  Val Ala Leu
    2120                2125                2130


Gly Ala  Glu Leu Thr Phe Gly  Ser Val Ser Ala Asp  Gly Thr Glu
    2135                2140                2145


Glu Gly  Leu Glu Gly Val Glu  Leu Gly Gly Glu Glu  Asp Gly Leu
    2150                2155                2160


Gly Gly  Val Gly Val Arg Ala  Ala Ala Gly Ala Asp  Gly Leu Ala
    2165                2170                2175


Leu His  Glu Pro Gly Glu Val  Gly Pro Val Gly Val  Lys Asn Glu
    2180                2185                2190


Val Ser  Ser Val Leu Phe Asp  Ala Phe Leu Thr Ser  Gly Leu His
    2195                2200                2205


Glu Leu  Val Ser Pro Leu Gly  Asp Lys Glu Ala Val  Arg Val Pro
    2210                2215                2220
```

```
Val Asp  Arg Leu Tyr Gly Pro  Val Leu Glu Arg Gly  Ala Ala Val
    2225                2230                2235


Leu Val  Val Glu Glu Pro Arg  Pro Leu Arg Asp Glu  Gly Pro Gly
    2240                2245                2250


Pro Gly  Gln His Glu Gly Gly  His Val Gly Gly Val  Ala Val Val
    2255                2260                2265


Val His  Gln Arg Val His Leu  Leu Gln Gly Met Gln  Ala His Val
    2270                2275                2280


Pro Leu  Val His Ile Gln Glu  Gly Asp Trp Leu Val  Ser Val Gly
    2285                2290                2295


His Val  Thr Gly Gly Pro Gly  Arg Gly Gly Ile Lys  Gly Gly Gly
    2300                2305                2310


Pro Leu  Leu Val Leu Thr Val  Phe Arg Ile Ala Val  Gln Glu Arg
    2315                2320                2325


Gln Leu  Leu Gly Val Phe Pro  Leu Glu Gly Trp His  Asn Leu Gly
    2330                2335                2340


Thr Gln  Val Val Ser Phe Lys  Arg Gly Gly Phe Asp  Ile Asp Gly
    2345                2350                2355


Ala Val  Gly Asp Ala Phe His  Glu Pro Leu Val His  Leu Val Arg
    2360                2365                2370


Lys Asp  Asp Leu Phe Val Val  Glu Leu Gly Gly Glu  Gly Ala Val
    2375                2380                2385


Glu Gly  Val Gly Glu Glu Leu  Gly Asp Gly Ala His  Gly Leu Val
    2390                2395                2400


Leu Phe  Leu Val Gly Ala Leu  Leu Gly Gly Asp Val  Glu Leu His
    2405                2410                2415
```

```
Val Leu  Ala Arg His Ala Leu  Pro Phe Gly Glu Asp  Gly Gly Glu
    2420                2425                2430

Leu Val  Gly His Asp Ser Asp  Pro Pro Ala Ala Val  Val Gln Gly
    2435                2440                2445

Asp Glu  Val His Ala Gly Gly  His Leu Ala Ala Gln  Gly Leu Val
    2450                2455                2460

Gly Pro  Ala Glu Ala Pro Ala  Leu Ala Arg Ala Glu  Gly Gly Gln
    2465                2470                2475

Arg Val  Gln His Glu Leu Val  Gly Gly Val Gly Val  His Gly Glu
    2480                2485                2490

Asp Ala  Gly Gln Lys Leu Gly  Val Glu Val Ala Asp  Ala Gly Val
    2495                2500                2505

Gln Ile  Val Gln Arg Arg Leu  Pro Val Ala His Gly  Gln Arg Ala
    2510                2515                2520

Leu Val  Gly Ala Glu Gly Arg  Ala Pro Gly His Gly  Val Arg Glu
    2525                2530                2535

Arg Gly  Gly Val His Ala Ala  Asp Val Val Asp Val  Glu Gly Leu
    2540                2545                2550

Leu Glu  Asp Ala Asp Val Gly  Gly Val Ala Ala Pro  Pro Ala Asp
    2555                2560                2565

Ala Gly  Ala His Val Val Val  Gln Leu Val Arg Gly  Arg Glu Glu
    2570                2575                2580

Pro Arg  Ala Glu Val Gly Ala  Leu Arg Leu Phe Gly  Ala Val Asp
    2585                2590                2595

Asp Leu  Ala Glu Asp Gly Val  Gly Val Gly Gly Asp  Gly Gly Pro
    2600                2605                2610
```

```
Leu Glu  Asp Val Glu Val Gly  Val Gly Gln Ala Asp  Arg Val Pro
    2615                2620                2625

Asp Glu  Val Gly Val Gly Val  Leu Gln Leu Gly Asp  Glu Leu Gly
    2630                2635                2640

Gly Asp  Glu Asp Val Gln Gly  Ala Val Val Glu Gly  Leu Leu Asp
    2645                2650                2655

Asp Val  Val Leu Glu Leu Ala  Leu Leu Leu Pro Gln  Leu Ala Val
    2660                2665                2670

Glu Lys  Glu Leu Phe Ala Val  Leu Pro Val Leu Phe  Glu Gly Glu
    2675                2680                2685

Pro Val  Leu Ile Gly Thr Val  Arg Ala His His Val  Glu Leu Val
    2690                2695                2700

Asp Gly  Leu Val Gly Ala Ala  Ala Leu Leu His Gly  Glu Gly Val
    2705                2710                2715

Ser Leu  Cys Gly Leu Ala Gln  Gly Gly Val Gly Glu  Gly Glu Gly
    2720                2725                2730

Val Ala  His His Asp Leu Glu  Glu Leu Val Leu Glu  Val Glu Val
    2735                2740                2745

Val Ala  Ala Ala Leu Leu Pro  Glu Leu Glu Val Arg  Ala Leu Leu
    2750                2755                2760

Val Gly  Gly Val Gly Gln Ser  Glu Ser Asn Ile Val  Glu Glu Asp
    2765                2770                2775

Leu Ala  Arg Ala Gly His Glu  Val Ala Ser Asp Ala  Glu Arg Leu
    2780                2785                2790

Gly His  Leu Gly Pro Val Val  Asp Asp Leu Gly Gly  Glu Asp Asp
    2795                2800                2805
```

```
Leu Val  Glu Ala Val Asp Val  Val Pro Asp Asp Val  Glu Phe His
    2810                2815                2820


Glu Ser  Arg Ala Ala Leu Asn  Val Gly Gln Leu Leu  Glu Leu Val
    2825                2830                2835


Val Gly  Glu Leu Gly Gly Val  Ala Glu Pro Val Leu  Leu Glu Gly
    2840                2845                2850


Pro Val  Gly Asp Val Gly Val  Gly Ala Glu Glu Gly  Ser Pro Glu
    2855                2860                2865


Ile His  Gly Gln Gly Gly Leu  Gln Ala Val Pro Val  Leu Thr Glu
    2870                2875                2880


Leu Leu  Ala His Gly His Phe  Phe Gly Gly Asp Ala  Val Glu Gly
    2885                2890                2895


Ala Gly  Val Ala Val Pro Ala  Val Pro Leu Glu Leu  Glu Gly Glu
    2900                2905                2910


Val Val  Gly Glu Leu Asp Glu  Arg Arg Val Pro Gly  Glu Phe His
    2915                2920                2925


Asp Gln  His Glu Gly Asp Glu  Leu Leu Ala Glu Gly  Pro His Pro
    2930                2935                2940


Gly Val  Gly Phe His Ile Val  Gly Glu Glu Glu Pro  Phe Gly Ala
    2945                2950                2955


Arg Met  Arg Ala Asp Gly Glu  Glu Leu Asp Leu Leu  Pro Pro Val
    2960                2965                2970


Gly Gly  Met Ala Val Asp Val  Met Glu Val Glu Met  Pro Thr Ala
    2975                2980                2985


Arg Arg  Ala Leu Val Leu Val  Phe Ile Gln Ala Ser  Ala Val Leu
    2990                2995                3000
```

```
Ala Thr  Leu His Gly Met His  Val Leu His Glu Leu  Tyr Leu Gly
    3005                 3010                 3015


Ser Phe  Asp Glu Glu Phe Gln  Trp Ala Val Glu Arg  Trp Arg Leu
    3020                 3025                 3030


His Leu  Val Leu Tyr Tyr Val  Leu Ala Ile Gly Val  Ala Ile Val
    3035                 3040                 3045


Cys Leu  Asp Gly Gly His Ala  Asp Glu Pro Ala Arg  Glu Ala Gly
    3050                 3055                 3060


Pro Asp  Phe Gly Ser Asp Gly  Ser Glu Ser Glu Asp  Glu Gly Ala
    3065                 3070                 3075


Gln Ala  Gly Ala Val Gln Gly  Pro Glu Thr Leu Arg  Ser Gln Val
    3080                 3085                 3090


Ser Gly  Gln Arg Arg Arg Ala  Val Asp Leu Gln Glu  Leu Phe Gln
    3095                 3100                 3105


Gly Ala  Arg Glu Val Gln Met  Val Leu Asp Leu His  Gly Ala Val
    3110                 3115                 3120


Gly Gly  Asp Val His Gly Leu  Gln Gly Pro Val Pro  Leu Gly Arg
    3125                 3130                 3135


His His  Arg Ala Pro Phe Leu  Leu Gly Arg Cys Phe  His Ala Gly
    3140                 3145                 3150


Gln Lys  Arg Arg Arg Gly Arg  Ala Pro Gly Gly Arg  Gly Gly Ser
    3155                 3160                 3165


Gly Pro  Gly Gly Arg Gly Gly  Arg Gly Thr Ser Ala  Pro Arg Ala
    3170                 3175                 3180


Gly Arg  Phe Trp Tyr Cys Ala  Arg Arg Arg Leu Ala  Ala Thr Thr
    3185                 3190                 3195
```

```
Arg Arg  Leu Thr Ser Trp Ile  Arg Leu Trp Val Lys  Ala Thr Gly
    3200                3205                3210

Pro Val  Ser Leu Asn Leu Lys  Glu Ser Ser Thr Glu  Ser Ile Ser
    3215                3220                3225

Val Ser  Leu Thr Ala Ala Cys  Arg Arg Ile Ser Cys  Thr Ser Pro
    3230                3235                3240

Glu Leu  Ser Trp Ala Ile Ser  Val Met Asn Cys Ser  Ile Ser Ser
    3245                3250                3255

Ser Arg  Ser Pro Arg Pro Ala  Arg Ser Thr Val Ala  Ala Arg Ser
    3260                3265                3270

Leu Glu  Met Arg Pro Met Ser  Cys Glu Lys Ala Phe  Met Pro Ala
    3275                3280                3285

Ser Phe  Gln Thr Arg Leu Thr  Thr Ala Pro Ser Gly  Ser Arg Ala
    3290                3295                3300

Arg Met  Thr Thr Trp Ala Arg  Leu Ser Ser Thr Trp  Arg Val Lys
    3305                3310                3315

Thr Ala  Leu Gln Arg Arg Trp  Arg Leu Ser Val Val  Ala Met Cys
    3320                3325                3330

Ser Val  Thr Lys Lys Tyr Met  Ile Gln Arg Arg Ser  Gly Ile Ser
    3335                3340                3345

Leu Thr  Ser Pro Arg Ala Ser  Lys Arg Ser Met Ala  Ser Lys Ser
    3350                3355                3360

Thr Ala  Lys Leu Lys Asn Trp  Glu Leu Arg Ala Glu  Thr Val Asn
    3365                3370                3375

Ser Ser  Ser Arg Arg Arg Met  Ser Ser Ala Met Val  Ala Arg Thr
    3380                3385                3390
```

```
Ser Arg  Ser Lys Ala Pro Gly  Gly Ser Ser Ser Ser  Ile Ser Ser
    3395                 3400                 3405


Ser Ser  Thr Asn Ile Ser Ser  Thr Ser Ser Ser Gly  Gly Gly Gly
    3410                 3415                 3420


Gly Gly  Gly Ala Leu Arg Arg  Arg Arg Arg Thr Gly  Arg Arg Ser
    3425                 3430                 3435


Met Lys  Arg Ser Met Val Ser  Pro Arg Arg Arg Arg  Met Val Ser
    3440                 3445                 3450


Val Thr  Ala Arg Pro Ser Ser  Arg Gly Arg Ser Val  Lys Thr Pro
    3455                 3460                 3465


Pro Arg  Ile Ser Arg Trp Pro  Pro Gly Gly Ser Pro  Leu Gly Arg
    3470                 3475                 3480


Glu Arg  Ala Leu Thr Met His  Leu Ile Asn Trp Pro  Val Gly Thr
    3485                 3490                 3495


Pro Arg  Lys Asp Leu Ser Val  Ser Arg Ser Thr Gly  Ser Glu Asn
    3500                 3505                 3510


Arg Thr  Lys Ala Ser Ser Gln  Ser Gln Ser Gln Gly  Arg Leu Ser
    3515                 3520                 3525


Pro Val  Ser Cys Ser Ser Gly  Ile Ser Gly Gly Gly  Arg Ala Met
    3530                 3535                 3540


Leu Leu  Val Met Lys Leu Lys  Ala Val Leu Arg Arg  Arg Met Val
    3545                 3550                 3555


Ala Arg  Ser Thr Arg Ser Leu  Gly Pro Ala Cys Trp  Met Arg Arg
    3560                 3565                 3570


Arg Ser  Ala Met Pro Gln Ala  Trp Ser His Leu Ala  Arg Ser Leu
    3575                 3580                 3585
```

```
Ser Cys  Met Ser Arg Ser Thr  Gly Thr Ser Ser Ser  Pro Ala Arg
    3590                3595                3600

Pro Cys  Met Arg Val Ser Pro  Asn Pro Arg Trp Gly  Trp Thr Ser
    3605                3610                3615

Ala Arg  Ser Ala Thr Thr Arg  Ser Ala Arg Met Ala  Cys Cys Ile
    3620                3625                3630

Trp Val  Arg Val Val Trp Lys  Ser Ser Lys Ser Thr  Lys Arg Trp
    3635                3640                3645

Ala Pro  Val Leu Met Val Glu  Gln Leu Ala Met Thr  Asp Gln Leu
    3650                3655                3660

Thr Val  Trp Trp Pro Gly Arg  Thr Ser Ser Trp Tyr  Leu Arg Arg
    3665                3670                3675

Glu Ala  Arg Val Ser Lys Met  Ser Leu Gln Val Arg  Thr Arg Tyr
    3680                3685                3690

Trp Tyr  Pro Thr Arg Lys Cys  Gly Gly Gly Trp Arg  Ser Gly His
    3695                3700                3705

Arg Ser  Val Ala Gly Ala Pro  Gly Ala Arg Ser Ser  Ser Met Arg
    3710                3715                3720

Arg Trp  Pro Met Tyr Leu Asp  Ile Gln Val Met Pro  Ala Ala Val
    3725                3730                3735

Val Glu  Ala Arg Gly Asn Ser  Arg Thr Arg Phe Gln  Met Leu Arg
    3740                3745                3750

Ser Gly  Arg Lys Phe Met Val  Ala Ala Val Trp Pro  Val Arg Arg
    3755                3760                3765

Ala Gln  Ser Trp Met Leu Thr  Tyr Gly Gln Lys Arg  Lys Arg Ser
    3770                3775                3780
```

```
Ala Ala  Arg Leu Arg Gly Leu  Glu Ala Lys Arg Thr  Gly Trp Ala
    3785                 3790                 3795


Ala Arg  Val Pro Arg Phe Glu  Ser Arg Ile Arg Leu  Glu Pro Gln
    3800                 3805                 3810


Leu Thr  Trp Tyr Trp His Ser  Arg Leu Asp Pro Ser  Leu Leu Thr
    3815                 3820                 3825


Lys Pro  Pro Gly Tyr Gly Gly  Gly Ser Phe Phe Gly  Leu Gly Arg
    3830                 3835                 3840


Trp Ser  Lys Thr Ser Lys Arg  Gly Lys Arg Pro Pro  Ala Met Ala
    3845                 3850                 3855


Arg Cys  Arg Ser Leu Glu Lys  Glu Ser Pro Gly Leu  Arg Cys Gly
    3860                 3865                 3870


Val Pro  Arg Phe Glu Pro Gln  Arg Ser Ala Pro Ala  Gly Phe Arg
    3875                 3880                 3885


Gly Arg  Gly Arg Gly Cys Pro  Val Val Ser Lys Thr  Pro Pro Ala
    3890                 3895                 3900


Asp Phe  Ser Ser Tyr Gly Ala  Ser Pro Ser Phe Ser  Cys Val Phe
    3905                 3910                 3915


Ala Arg  Cys Ile Pro Tyr Cys  Gly Arg Cys Ala Pro  Thr Leu His
    3920                 3925                 3930


Leu Asn  Arg Pro Tyr Arg Arg  Ser Ser Ser Asn Ser  Arg Arg Phe
    3935                 3940                 3945


Cys Pro  Arg Pro Ser Ser Ser  Gln Pro Leu Pro Arg  Arg Pro Pro
    3950                 3955                 3960


Ala Glu  Pro Ala Phe Ser Met  Thr Trp Pro Trp Lys  Arg Ala Arg
    3965                 3970                 3975
```

```
Gly Trp  Arg Gly Trp Gly Arg  Arg Arg Arg Ser Gly  Thr Arg Ala
    3980                 3985                 3990


Cys Arg  Lys Gly Thr Leu Ala  Arg Pro Thr Cys Pro  Ser Arg Thr
    3995                 4000                 4005


Cys Ser  Glu Thr Gly Ala Ala  Arg Ser Pro Arg Arg  Cys Ala Pro
    4010                 4015                 4020


Pro Ala  Ser Thr Arg Gly Gly  Ser Cys Gly Ala Ala  Trp Thr Glu
    4025                 4030                 4035


Ser Gly  Cys Gly Thr Arg Ile  Ser Arg Arg Thr Ser  Arg Gly Ser
    4040                 4045                 4050


Ala Pro  Arg Ala Arg Thr Trp  Pro Arg Pro Thr Trp  Ser Arg Arg
    4055                 4060                 4065


Thr Ser  Arg Pro Arg Arg Arg  Ala Thr Ser Lys Asn  Pro Ser Thr
    4070                 4075                 4080


Thr Thr  Cys Ala Arg Ser Arg  Ala Arg Arg Pro Trp  Ala Cys Thr
    4085                 4090                 4095


Cys Gly  Thr Cys Trp Arg Pro  Ser Cys Arg Thr Pro  Arg Ala Ser
    4100                 4105                 4110


Arg Arg  Arg Ser Cys Phe Trp  Trp Cys Ser Thr Val  Gly Thr Thr
    4115                 4120                 4125


Arg Arg  Ser Gly Arg Arg Cys  Ile Ser Pro Ser Pro  Arg Ala Ala
    4130                 4135                 4140


Gly Ser  Trp Thr Trp Thr Phe  Cys Arg Ala Ser Trp  Cys Arg Ser
    4145                 4150                 4155


Ala Gly  Cys Arg Cys Pro Arg  Ser Trp Arg Leu Ser  Thr Ser Arg
    4160                 4165                 4170
```

```
Cys Ala  Trp Ala Ser Thr Thr  Leu Gly Arg Ser Thr  Arg Pro Arg
    4175                 4180                 4185


Thr Cys  Pro Thr Arg Arg Arg  Ser Thr Gly Phe Thr  Cys Ala Pro
    4190                 4195                 4200


Lys Cys  Pro Ala Thr Ile Trp  Gly Cys Thr Ala Thr  Thr Gly Cys
    4205                 4210                 4215


Thr Ala  Arg Ala Pro Ala Ala  Gly Ala Ser Ala Thr  Arg Ser Cys
    4220                 4225                 4230


Thr Ala  Cys Ser Gly Pro Pro  Gly Pro Gly Pro Arg  Gly Arg Ala
    4235                 4240                 4245


Thr Leu  Thr Trp Ala Arg Thr  Cys Ala Gly Ser Pro  Ala Ala Gly
    4250                 4255                 4260


Pro Trp  Lys Leu Pro Ala Val  Pro Pro Thr Trp Arg  Arg Trp Thr
    4265                 4270                 4275


Met Arg  Arg Arg Arg Ala Ser  Thr Trp Lys Thr Asp  Gly Ala Thr
    4280                 4285                 4290


Val Phe  Leu Leu Asp Ala Ala  Thr Ala Thr Ala Ser  Ser Arg Asp
    4295                 4300                 4305


Ala Gly  Gly Ala Ala Glu Pro  Ala Val Arg His Leu  Leu Gly Arg
    4310                 4315                 4320


Leu Asp  Pro Gly His Ala Thr  His His Gly Ala Asp  Asp Pro Gln
    4325                 4330                 4335


Ser Arg  Ser Leu Thr Ala Ala  Ser Gly Gln Pro Ala  Leu Gly His
    4340                 4345                 4350


Pro Gly  Gly Arg Gly Ala Leu  Ala Leu Glu Pro His  Ala Arg Glu
    4355                 4360                 4365
```

```
Gly Ala  Gly His Arg Glu Arg  Ala Gly Gly Glu Gln  Gly His Pro
    4370                4375                4380


Arg Arg  Arg Gly Arg Ala Gly  Val Gln Arg Ala Ala  Gly Ala Arg
    4385                4390                4395


Gly Pro  Leu Gln Gln His Gln  Arg Ala Asp Glu Pro  Gly Pro His
    4400                4405                4410


Gly Asp  Arg Arg Ala Arg Gly  Gly Val Ala Ala Arg  Ala Val Pro
    4415                4420                4425


Pro Arg  Val Glu Pro Gly Leu  His Gly Gly Ala Glu  Arg Leu Pro
    4430                4435                4440


Glu His  Ala Ala Arg Gln Arg  Ala Pro Gly Pro Gly  Gly Leu His
    4445                4450                4455


Gln Leu  His Gln Arg Ala Ala  Ala Asp Gly Gly Arg  Gly Ala Pro
    4460                4465                4470


Glu Arg  Gly Val Pro Val Gly  Ala Gly Leu Leu Leu  Pro Asp Gln
    4475                4480                4485


Ser Pro  Gly Leu Ala Asp Arg  Glu Pro Glu Pro Gly  Phe Gln Glu
    4490                4495                4500


Leu Ala  Gly Thr Val Gly Arg  Ala Gly Pro Gly Arg  Gly Pro Arg
    4505                4510                4515


Asp Gly  Val Glu Pro Ala Asp  Ala Glu Leu Ala Pro  Ala Ala Ala
    4520                4525                4530


Ala Gly  Gly Ala Leu His Gly  Gln Arg Gln Arg Glu  Pro Arg Leu
    4535                4540                4545


Val Pro  Gly Leu Pro Ala Pro  Val Pro Arg Gly His  Arg Ala Gly
    4550                4555                4560
```

```
Ala Arg  Gly Arg Ala Asp Leu  Pro Gly Asp His Pro  Arg Glu Pro
    4565                4570                4575


Arg Ala  Gly Pro Gly Gly Pro  Gly Gln Pro Gly Gly  His Pro Glu
    4580                4585                4590


Leu Pro  Ala Asp Gln Pro Val  Ala Glu Asp Pro Ala  Pro Val Arg
    4595                4600                4605


Ala Glu  His Arg Gly Gly Ala  His Pro Ala Leu Arg  Ala Ala Glu
    4610                4615                4620


Arg Gly  Ala Val Pro Asp Ala  Gly Gly Gly His Ala  Gln Arg Arg
    4625                4630                4635


Ala Arg  His Asp Arg Ala Gln  His Gly Ala Gln His  Val Arg Ser
    4640                4645                4650


Gln Pro  Pro Val His Gln Ala  Asp Gly Leu Leu Ala  Ser Gly Gly
    4655                4660                4665


Arg His  Glu Leu Gly Leu Leu  Tyr Gln Arg His Leu  Glu Pro Ala
    4670                4675                4680


Leu Ala  Pro Ala Ala Arg Val  Leu His Gly Arg Val  Arg His Ala
    4685                4690                4695


Arg Pro  Gln Arg Arg Val Pro  Val Gly Arg Arg Gly  Gln Gln Arg
    4700                4705                4710


Val Leu  Ala Ala Pro Arg His  His Arg Val Glu Glu  Arg Gly Arg
    4715                4720                4725


Gly Pro  Ala Ala Val Leu Gly  Ala Val Arg Ser Arg  Gly Cys Cys
    4730                4735                4740


Arg Gly  Gly Ala Gly Arg Gln  Pro Leu Pro Glu Pro  Ala Leu Phe
    4745                4750                4755
```

```
Ala Glu  Gln Arg Ala Gln Gln  Arg Ala Gly Ser Ala  Asp Ala Ala
    4760                4765                4770

Ala Pro  Ala Gly Arg Gly Gly  Val Pro Glu Arg Leu  Leu Val Glu
    4775                4780                4785

Ala Arg  Ala Arg Glu Glu Leu  Pro Gln Arg Asp Arg  Glu Pro Gly
    4790                4795                4800

Gly Gln  Asp Glu Pro Leu Glu  Asp Val Arg Ala Arg  Ala Gln Gly
    4805                4810                4815

Arg Ala  Pro Ser Gln Gln Arg  Arg His Pro Thr Pro  Ala Thr Arg
    4820                4825                4830

Gln Ala  Ala Gly Ser Gly Val  Gly Arg Gly Phe Arg  Arg Arg Gln
    4835                4840                4845

Gln Arg  Val Gly Leu Gly Trp  Glu Trp Trp Trp Pro  Val Arg Ser
    4850                4855                4860

Leu Ala  Pro Pro Tyr Arg Ala  Pro Asp Val Arg Ile  Lys Asn Lys
    4865                4870                4875

Lys Arg  Tyr Ser Pro Arg Pro  Trp Arg Pro Ala Cys  Val Leu Leu
    4880                4885                4890

Cys Cys  Leu Tyr Asp Glu Ala  Arg Val Pro Gly Gly  Ser Ser Ser
    4895                4900                4905

Leu Val  Arg Glu Arg Asp Ala  Ala Gly Gly Gly Gly  Gly Asp Ala
    4910                4915                4920

Ala Pro  Ala Gly Gly Ala Leu  Arg Ala Pro Ala Val  Pro Gly Ala
    4925                4930                4935

Tyr Gly  Gly Ala Glu Gln His  Ser Leu Leu Gly Ala  Gly Thr Leu
    4940                4945                4950
```

```
Val Arg  Tyr His Pro Val Val  Pro Gly Gly Gln Gln  Val Gly Gly
    4955                4960                4965


His Arg  Leu Ala Glu Leu Pro  Glu Arg Pro Gln Gln  Leu Pro Asp
    4970                4975                4980


His Arg  Gly Ala Glu Gln Arg  Phe His Pro His Gly  Gly Gln His
    4985                4990                4995


Pro Asp  His Gln Leu Arg Ala  Leu Ala Val Gly Arg  Pro Ala Glu
    5000                5005                5010


Asn His  His Ala His Gln His  Ala Gln Arg Glu Arg  Val His Val
    5015                5020                5025


Gln Gln  Gln Val Gln Gly Ala  Gly Asp Gly Leu Ala  Gln Asp Pro
    5030                5035                5040


Gln Trp  Gly Arg Gly Gly Glu  Leu Trp Ser Gly Arg  Ala Asp Leu
    5045                5050                5055


Arg Val  Gly Gly Val Ala Ala  Arg Gly Gln Leu Leu  Gly Asp His
    5060                5065                5070


Asp His  Arg Ser Asp Glu Gln  Arg His His Arg Gln  Leu Leu Gly
    5075                5080                5085


Gly Gly  Ala Ser Glu Arg Gly  Ala Gly Glu Arg His  Arg Arg Glu
    5090                5095                5100


Val Arg  His Ala Gln Leu Pro  Ala Gly Leu Gly Pro  Arg Asp Arg
    5105                5110                5115


Ala Gly  Asp Ala Gly Arg Val  His Gln Arg Gly Leu  Pro Pro Arg
    5120                5125                5130


His Arg  Pro Ala Ala Arg Leu  Arg Arg Gly Leu His  Arg Glu Pro
    5135                5140                5145
```

```
Pro Gln  Gln Pro Ala Gly His  Pro Gln Ala Ala Ala  Leu Pro Gly
    5150                5155                5160


Gly Leu  Pro Asp Pro Val Arg  Gly Pro Gly Gly Gly  Gln His Pro
    5165                5170                5175


Arg Ala  Leu Gly Cys Arg Ser  Leu Glu Lys Gln Gly  Gly Gly Arg
    5180                5185                5190


Arg Ser  Gly Asp Arg Ser Arg  Gly His Arg Leu Tyr  Arg Gly Ala
    5195                5200                5205


Gly Arg  Phe Cys Arg Arg Gly  Ser Gly Arg Gly Gly  Asn Arg Lys
    5210                5215                5220


Asp Ser  His Pro Ala Gly Gly  Glu Gly Gln Gln Gly  Gln Glu Leu
    5225                5230                5235


Gln Arg  Ala Arg Gly Gln Glu  Lys His Arg Leu Pro  Gln Leu Val
    5240                5245                5250


Pro Gly  Leu Gln Leu Arg Arg  Pro Arg Glu Gly Arg  Ala Leu Leu
    5255                5260                5265


Asp Ala  Ala His His Leu Gly  Arg His Leu Arg Arg  Gly Ala Ser
    5270                5275                5280


Leu Leu  Val Ala Ala Arg His  Asp Ala Arg Pro Gly  His Leu Pro
    5285                5290                5295


Leu His  Ala Ser Ser Gln Leu  Pro Gly Gly Gly Arg  Arg Ala Pro
    5300                5305                5310


Ala Arg  Leu Leu Gln Glu Leu  Leu Gln Arg Ala Gly  Arg Leu Leu
    5315                5320                5325


Ala Ala  Ala Ala Arg Leu His  Leu Ala His Ala Arg  Leu Gln Pro
    5330                5335                5340
```

```
Leu Pro  Arg Glu Pro Asp Pro  Arg Pro Pro Ala Arg  Ala His His
    5345                5350                5355


Tyr His  Arg Gln Lys Arg Ser  Cys Ser His Arg Ser  Arg Asp Pro
    5360                5365                5370


Ala Ala  Ala Gln Gln Tyr Pro  Gly Ser Pro Ala Arg  Asp Arg His
    5375                5380                5385


Arg Gln  Thr Pro His Leu Pro  Leu Arg Leu Gln Gly  Pro Gly Arg
    5390                5395                5400


Ser Arg  Ala Ala Arg Pro Leu  Glu Pro His Leu Leu  Lys Asn Val
    5405                5410                5415


His Ser  His Leu Ala Gln His  Arg Leu Gly Pro Ala  Arg Ala Gln
    5420                5425                5430


Gln Asp  Val Arg Arg Arg Ser  Pro Thr Leu His Ala  Thr Pro Arg
    5435                5440                5445


Ala Arg  Ala Arg Ala Leu Pro  Arg Ser Leu Gly Arg  Pro Gln Gly
    5450                5455                5460


Pro Arg  Ala Leu Ala His His  Arg Arg Arg Arg Asp  Arg Pro Gly
    5465                5470                5475


Gly Gly  Arg Arg Ala Gln Leu  His Ala Arg Arg Arg  Ala Arg Leu
    5480                5485                5490


His Arg  Gly Arg Arg His Arg  Gln Arg Gly Gly Arg  Cys Ala Pro
    5495                5500                5505


Val Arg  Pro Arg Gln Glu Pro  Ala Ala Ala His Arg  Pro Ala Ala
    5510                5515                5520


Pro Glu  His Pro Arg His Ala  Arg Gly Ala Ser Leu  Ala Ala Gln
    5525                5530                5535
```

```
Gly Gln  Ala His Gly Thr Gln  Gly His Ala Gln Gly  Gly Gln Thr
    5540                5545                5550

Arg Gly  Leu Arg Gln Gln Gln  Arg Arg Gln Asp Pro  Gln Thr Arg
    5555                5560                5565

Gly His  Gly Gly Gly Gly Gly  His Arg Gln His Val  Pro Pro Ala
    5570                5575                5580

Ala Arg  Gln Arg Val Leu Gly  Ala Arg Arg Arg His  Arg Cys Ala
    5585                5590                5595

Arg Ala  Arg Ala His Pro Pro  Pro Ser His Leu Lys  Met Leu Thr
    5600                5605                5610

Ser Arg  Cys Cys Val Pro Ala  Ala Arg Arg Met Ser  Lys Arg Lys
    5615                5620                5625

Tyr Lys  Glu Glu Met Leu Gln  Val Ile Ala Pro Glu  Ile Tyr Gly
    5630                5635                5640

Pro Ala  Val Lys Glu Glu Arg  Lys Pro Arg Lys Leu  Lys Arg Val
    5645                5650                5655

Lys Lys  Asp Lys Lys Glu Glu  Glu Asp Val Asp Gly  Leu Val Glu
    5660                5665                5670

Phe Val  Arg Glu Phe Ala Pro  Arg Arg Arg Val Gln  Trp Arg Gly
    5675                5680                5685

Arg Lys  Val Lys Pro Val Leu  Arg Pro Gly Thr Thr  Val Val Phe
    5690                5695                5700

Thr Pro  Gly Glu Arg Ser Gly  Ser Ala Ser Lys Arg  Ser Tyr Asp
    5705                5710                5715

Glu Val  Tyr Gly Asp Glu Asp  Ile Leu Glu Gln Ala  Val Glu Arg
    5720                5725                5730
```

```
Leu Gly  Glu Phe Ala Tyr Gly  Lys Arg Ser Arg Pro  Ala Pro Leu
    5735                5740                5745


Lys Glu  Glu Ala Val Ser Ile  Pro Leu Asp His Gly  Asn Pro Thr
    5750                5755                5760


Pro Ser  Leu Lys Pro Val Thr  Leu Gln Gln Val Leu  Pro Ser Ala
    5765                5770                5775


Ala Pro  Arg Arg Gly Phe Lys  Arg Glu Gly Gly Glu  Asp Leu Tyr
    5780                5785                5790


Pro Thr  Met Gln Leu Met Val  Pro Lys Arg Gln Lys  Leu Glu Asp
    5795                5800                5805


Val Leu  Glu His Met Lys Val  Asp Pro Glu Val Gln  Pro Glu Val
    5810                5815                5820


Lys Val  Arg Pro Ile Lys Gln  Val Ala Pro Gly Leu  Gly Val Gln
    5825                5830                5835


Thr Val  Asp Ile Lys Ile Pro  Thr Glu Pro Met Glu  Thr Gln Thr
    5840                5845                5850


Glu Pro  Val Lys Pro Ser Thr  Ser Thr Met Glu Val  Gln Thr Asp
    5855                5860                5865


Pro Trp  Met Pro Ala Pro Ala  Ser Thr Thr Arg Arg  Arg Arg Lys
    5870                5875                5880


Tyr Gly  Ala Ala Ser Leu Leu  Met Pro Asn Tyr Ala  Leu His Pro
    5885                5890                5895


Ser Ile  Ile Pro Thr Pro Gly  Tyr Arg Gly Thr Arg  Phe Tyr Arg
    5900                5905                5910


Gly Tyr  Thr Ser Ser Arg Arg  Lys Thr Thr Thr Arg  Arg Arg Arg
    5915                5920                5925
```

```
Arg Arg  Thr Arg Arg Ser Ser  Thr Ala Thr Ser Ala  Ala Ala Leu
    5930                5935                5940

Val Arg  Arg Val Tyr Arg Ser  Gly Arg Glu Pro Leu  Thr Leu Pro
    5945                5950                5955

Arg Ala  Arg Tyr His Pro Ser  Ile Ala Ile Leu Cys  Arg Arg Leu
    5960                5965                5970

Leu Leu  Ala Asp Met Ala Leu  Thr Cys Arg Leu Arg  Val Pro Ile
    5975                5980                5985

Thr Gly  Tyr Arg Gly Arg Lys  Pro Arg Arg Arg Arg  Leu Thr Gly
    5990                5995                6000

Asn Gly  Leu Arg Arg His His  His Arg Arg Arg Arg  Ala Ile Ser
    6005                6010                6015

Lys Arg  Leu Gly Gly Gly Phe  Leu Pro Ala Leu Ile  Pro Ile Ile
    6020                6025                6030

Ala Ala  Ala Ile Gly Ala Ile  Pro Gly Ile Ala Ser  Val Ala Val
    6035                6040                6045

Gln Ala  Ser Gln Arg His Asp  Thr Ala Trp Lys Ile  Cys Asn Lys
    6050                6055                6060

Lys Met  Asp Arg Ser Trp Ser  Cys Asp Val Cys Phe  Met Glu Asp
    6065                6070                6075

Ile Asn  Phe Ser Ser Leu Ala  Pro Arg His Gly Thr  Arg Pro Phe
    6080                6085                6090

Met Gly  Thr Trp Ser Asp Ile  Gly Asn Ser Gln Leu  Asn Gly Gly
    6095                6100                6105

Ala Phe  Asn Trp Ser Ser Leu  Trp Ser Gly Leu Lys  Asn Phe Gly
    6110                6115                6120
```

```
Ser Thr  Leu Lys Thr Tyr Gly  Asn Lys Ala Trp Asn  Ser Ser Thr
    6125                 6130                 6135


Gly Gln  Ala Leu Arg Glu Lys  Leu Lys Glu Gln Asn  Phe Gln Gln
    6140                 6145                 6150


Lys Val  Val Asp Gly Leu Ala  Ser Gly Ile Asn Gly  Val Val Asp
    6155                 6160                 6165


Leu Ala  Asn Gln Ala Val Gln  Lys Gln Ile Asn Ser  Arg Leu Asp
    6170                 6175                 6180


Ala Val  Pro Pro Ala Gly Ser  Val Glu Met Pro Gln  Val Glu Glu
    6185                 6190                 6195


Glu Leu  Pro Pro Leu Asp Lys  Arg Gly Asp Lys Arg  Pro Arg Pro
    6200                 6205                 6210


Asp Ala  Glu Glu Thr Leu Leu  Thr His Thr Asp Glu  Pro Pro Pro
    6215                 6220                 6225


Tyr Glu  Glu Ala Val Lys Leu  Gly Leu Pro Thr Thr  Arg Pro Val
    6230                 6235                 6240


Ala Pro  Leu Ala Thr Gly Val  Leu Lys Pro Ser Ser  Ser Ser Gln
    6245                 6250                 6255


Pro Ala  Thr Leu Asp Leu Pro  Pro Pro Ala Ser Arg  Pro Ser Thr
    6260                 6265                 6270


Val Ala  Lys Pro Leu Pro Pro  Val Ala Val Ala Ser  Arg Ala Pro
    6275                 6280                 6285


Arg Gly  Arg Pro Gln Ala Asn  Trp Gln Ser Thr Leu  Asn Ser Ile
    6290                 6295                 6300


Val Gly  Leu Gly Val Gln Ser  Val Lys Arg Arg Arg  Cys Tyr Lys
    6305                 6310                 6315
```

```
Thr Leu  Arg Leu Thr Cys Leu  Ser Val Cys Ile Cys  Met Ser Ala
    6320                6325                6330

Asp Gln  Lys Glu Glu Glu Ala  Arg Arg Arg Val Ala  Arg Trp Pro
    6335                6340                6345

Pro His  Arg Cys Cys Pro Ser  Gly Arg Thr Cys Thr  Ser Pro Asp
    6350                6355                6360

Arg Thr  Leu Arg Ser Thr Val  Arg Val Trp Cys Ser  Ser Pro Ala
    6365                6370                6375

Pro Gln  Thr Pro Thr Ser Val  Trp Gly Thr Ser Leu  Gly Thr Pro
    6380                6385                6390

Arg Trp  Arg Pro Arg Thr Met  Pro Pro Thr Ala Ala  Ser Gly Arg
    6395                6400                6405

Cys Ala  Ser Cys Pro Trp Thr  Ala Arg Thr Thr Pro  Thr Arg Thr
    6410                6415                6420

Lys Cys  Ala Thr Arg Trp Pro  Trp Ala Thr Thr Ala  Cys Trp Thr
    6425                6430                6435

Trp Pro  Ala Pro Thr Leu Thr  Ser Ala Ala Cys Trp  Ile Gly Gly
    6440                6445                6450

Pro Ala  Ser Asn Pro Thr Pro  Ala Pro Pro Thr Thr  Ala Trp Leu
    6455                6460                6465

Pro Arg  Glu Arg Pro Thr Leu  Ala Ser Gly His Ile  Lys Leu Val
    6470                6475                6480

Ile Leu  Ile Gln Lys Lys Pro  Ile His Met Glu Met  His Leu Cys
    6485                6490                6495

Lys Ala  Leu Ala Leu Gln Arg  Met Val Phe Asn Leu  Glu Leu Thr
    6500                6505                6510
```

```
Ala Met  Val Arg Gln Ser Met  Gln Thr Lys Leu Ile  Asn Gln Ser
    6515                6520                6525

Leu Lys  Trp Val Met Leu Asn  Gly Met Thr Ser Leu  Val Leu Met
    6530                6535                6540

Lys Asn  Met Glu Ala Glu Leu  Leu Ser Leu Thr Pro  Lys Ser Leu
    6545                6550                6555

Ala Met  Val Leu Leu Pro Ser  Leu Pro Ile Lys Lys  Glu Ala Arg
    6560                6565                6570

Gln Met  Lys Pro Lys Gln Ala  Val Pro Lys Asn Met  Thr Leu Thr
    6575                6580                6585

Trp His  Ser Ser Ile Ile Glu  Val Gln Leu Pro Pro  Ala Pro Gln
    6590                6595                6600

Lys Leu  Phe Cys Ile Leu Arg  Met Trp Ile Trp Lys  Leu Gln Ile
    6605                6610                6615

Pro Ile  Leu Tyr Thr Arg Gln  Val Gln Met Thr Val  Ala Leu Leu
    6620                6625                6630

Ser Ile  Trp Val Ser Ser Pro  Cys Pro Thr Asp Pro  Thr Thr Leu
    6635                6640                6645

Ala Ser  Glu Thr Thr Leu Ser  Val Cys Thr Thr Thr  Ala Leu Ala
    6650                6655                6660

Ile Trp  Val Tyr Trp Leu Asp  Arg Pro Pro Ser Met  Leu Trp Trp
    6665                6670                6675

Thr Cys  Arg Thr Glu Thr Pro  Asn Cys Pro Thr Ser  Ser Cys Leu
    6680                6685                6690

Thr Leu  Trp Val Thr Glu Pro  Gly Ile Ser Val Cys  Gly Ile Arg
    6695                6700                6705
```

```
Arg Trp  Thr Val Met Thr Pro  Met Cys Ala Leu Leu  Lys Ile Thr
    6710                 6715                 6720


Val Trp  Arg Met Asn Phe Leu  Thr Ile Ala Ser Pro  Trp Met Leu
    6725                 6730                 6735


Trp Val  Glu Leu Ile Leu Thr  Arg Glu Leu Arg Pro  Met Val Ile
    6740                 6745                 6750


Ile Lys  Pro Pro Gly Pro Lys  Met Ile Leu Leu Met  Met Leu Met
    6755                 6760                 6765


Asn Trp  Ala Arg Ala Ile Leu  Ser Pro Trp Arg Ser  Thr Ser Arg
    6770                 6775                 6780


Pro Thr  Cys Gly Gly Thr Ser  Ser Thr Arg Thr Trp  Arg Cys Thr
    6785                 6790                 6795


Cys Pro  Thr Pro Thr Ser Thr  Arg Arg Pro Thr Ser  Arg Cys Pro
    6800                 6805                 6810


Pro Thr  Pro Thr Pro Thr Ile  Thr Thr Ala Ala Trp  Trp Arg Pro
    6815                 6820                 6825


Arg Trp  Trp Thr Pro Thr Ser  Thr Ser Gly Arg Ala  Gly Arg Trp
    6830                 6835                 6840


Thr Pro  Trp Thr Thr Ser Thr  Pro Ser Thr Thr Thr  Ala Thr Arg
    6845                 6850                 6855


Ala Cys  Asp Thr Ala Pro Cys  Ser Trp Ala Thr Gly  Ala Thr Cys
    6860                 6865                 6870


Pro Ser  Thr Ser Arg Cys Pro  Lys Ser Phe Ser Pro  Ser Arg Ala
    6875                 6880                 6885


Ser Cys  Ser Cys Pro Gly Pro  Thr Pro Thr Ser Gly  Thr Ser Ala
    6890                 6895                 6900
```

```
Arg Thr  Ser Thr Ser Cys Arg  Ala Pro Ser Ala Thr  Thr Cys Ala
    6905                 6910                 6915


Arg Thr  Gly Pro Pro Ser Pro  Ser Pro Ala Ser Thr  Ser Thr Pro
    6920                 6925                 6930


Pro Ser  Ser Pro Trp Arg Thr  Thr Pro Pro Pro Arg  Ser Arg Pro
    6935                 6940                 6945


Cys Cys  Ala Thr Thr Pro Thr  Thr Ser Pro Ser Thr  Thr Thr Ser
    6950                 6955                 6960


Arg Arg  Pro Thr Cys Ser Thr  Pro Ser Arg Pro Thr  Pro Pro Thr
    6965                 6970                 6975


Cys Pro  Ser Pro Ser Pro Arg  Ala Thr Gly Pro Pro  Ser Ala Ala
    6980                 6985                 6990


Gly Pro  Ser Arg Ala Ser Arg  Pro Ala Arg Arg Pro  Arg Ser Ala
    6995                 7000                 7005


Pro Gly  Ser Thr Pro Thr Ser  Ser Thr Arg Ala Pro  Ser Pro Thr
    7010                 7015                 7020


Ser Thr  Ala Pro Ser Thr Ser  Thr Thr Pro Ser Arg  Arg Ser Pro
    7025                 7030                 7035


Ser Pro  Ser Thr Pro Pro Ser  Ala Gly Pro Ala Thr  Thr Ala Ser
    7040                 7045                 7050


Arg Pro  Thr Ser Ser Lys Ser  Ser Ala Pro Ser Thr  Glu Arg Gly
    7055                 7060                 7065


Thr Thr  Trp Pro Ser Ala Thr  Pro Arg Thr Gly Ser  Trp Ser Arg
    7070                 7075                 7080


Cys Trp  Pro Thr Thr Thr Ser  Ala Thr Arg Ala Ser  Thr Cys Pro
    7085                 7090                 7095
```

```
Arg Ala  Thr Arg Thr Ala Cys  Thr Pro Ser Ser Ala  Thr Ser Ser
    7100                 7105                 7110


Pro Ala  Ala Arg Ser Trp Thr  Arg Ser Thr Thr Arg  Thr Thr Arg
    7115                 7120                 7125


Pro Ser  Pro Trp Pro Thr Ser  Thr Thr Thr Arg Ala  Ser Ser Ala
    7130                 7135                 7140


Thr Ser  Arg Pro Pro Cys Ala  Arg Ala Ser Pro Thr  Pro Pro Thr
    7145                 7150                 7155


Thr Pro  Thr Arg Ser Ser Ala  Arg Ala Pro Ser Pro  Ala Ser Pro
    7160                 7165                 7170


Arg Lys  Ser Ser Ser Ala Thr  Gly Ser Cys Gly Ala  Ser Pro Ser
    7175                 7180                 7185


Pro Ala  Thr Ser Cys Pro Trp  Ala Arg Ser Pro Thr  Ser Ala Arg
    7190                 7195                 7200


Thr Cys  Ser Thr Pro Thr Pro  Pro Thr Arg Thr Ile  Ser Lys Ser
    7205                 7210                 7215


Thr Pro  Trp Met Ser Pro Pro  Phe Ser Met Leu Ser  Ser Lys Ser
    7220                 7225                 7230


Ser Thr  Ser Ser Glu Cys Thr  Ser Pro Thr Ala Ala  Ser Ser Arg
    7235                 7240                 7245


Pro Ser  Thr Cys Ala Arg Pro  Ser Arg Pro Ala Thr  Pro Pro Pro
    7250                 7255                 7260


Lys Pro  Leu Ala Ser Cys Lys  Met Thr Ala Cys Ala  Gly Ser Gly
    7265                 7270                 7275


Glu Gln  Glu Leu Arg Ala Ile  Leu Arg Asp Leu Gly  Cys Gly Pro
    7280                 7285                 7290
```

```
Cys Phe  Leu Gly Thr Phe Asp  Lys Arg Phe Pro Gly  Phe Met Ala
    7295                 7300                 7305

Pro His  Lys Leu Ala Cys Ala  Ile Val Asn Thr Ala  Gly Arg Glu
    7310                 7315                 7320

Thr Gly  Gly Glu His Trp Leu  Ala Phe Ala Trp Asn  Pro Arg Ser
    7325                 7330                 7335

His Thr  Cys Tyr Leu Phe Asp  Pro Phe Gly Phe Ser  Asp Glu Arg
    7340                 7345                 7350

Leu Lys  Gln Ile Tyr Gln Phe  Glu Tyr Glu Gly Leu  Leu Arg Arg
    7355                 7360                 7365

Ser Ala  Leu Ala Thr Glu Asp  Arg Cys Val Thr Leu  Glu Lys Ser
    7370                 7375                 7380

Thr Gln  Thr Val Gln Gly Pro  Arg Ser Ala Ala Cys  Gly Leu Phe
    7385                 7390                 7395

Cys Cys  Met Phe Leu His Ala  Phe Val His Trp Pro  Asp Arg Pro
    7400                 7405                 7410

Met Asp  Lys Asn Pro Thr Met  Asn Leu Leu Thr Gly  Val Pro Asn
    7415                 7420                 7425

Gly Met  Leu Gln Ser Pro Gln  Val Glu Pro Thr Leu  Arg Arg Asn
    7430                 7435                 7440

Gln Glu  Ala Leu Tyr Arg Phe  Leu Asn Ala His Ser  Ala Tyr Phe
    7445                 7450                 7455

Arg Ser  His Arg Ala Arg Ile  Glu Lys Ala Thr Ala  Phe Asp Arg
    7460                 7465                 7470

Met Asn  Gln Asp Met Ser Gly  Val Cys Met Met Leu  Tyr Ser Ser
    7475                 7480                 7485
```

```
Thr Ala  His Val Tyr Ala Thr  Phe Ser Glu Ala Leu  Thr Leu Phe
    7490                7495                7500

Arg Asn  Arg Arg Gly Ser Ala  Gly Ser Arg His Gly  Pro Arg Ala
    7505                7510                7515

Gly Ile  Arg Cys Gly Thr Gly  Thr Trp Ala Ala Thr  Thr Arg Gly
    7520                7525                7530

Ser Ala  Ala Ser Ala Arg Gly  Gly Arg Gly Thr Ser  Arg Ser Thr
    7535                7540                7545

Ala Cys  Ala Val Ala Gly Arg  Pro Ala Gly Arg Ala  Arg Arg Ser
    7550                7555                7560

Asn Arg  Ser Trp Asp Pro Arg  Ser Ala Arg Glu Ser  Tyr Gly Thr
    7565                7570                7575

Arg Gly  Cys Ser Thr Gly Thr  Pro Ser Gly Pro Gly  Ala Ser Arg
    7580                7585                7590

Ser Pro  Ala Pro Ser Arg Arg  Cys Pro Pro Arg Pro  Asp Pro Arg
    7595                7600                7605

Arg Trp  Pro Ser Arg Arg Gly  Ser Ser Cys Arg Ser  Ala Ala Pro
    7610                7615                7620

Cys Trp  Ala Arg Ser Arg Ala  Cys Gly Cys Asn Arg  Ser Ala Gly
    7625                7630                7635

Gly Ser  Ala Ser Ser Gly Pro  Ala Arg Ser Ser Cys  Pro Gly Thr
    7640                7645                7650

Trp Pro  Ser Lys Pro Pro Ala  Gly Gly Arg Pro Ala  Ala Pro Cys
    7655                7660                7665

Arg Pro  Arg Arg Arg Pro Arg  Arg Thr Cys Arg Thr  Gly Trp Trp
    7670                7675                7680
```

```
Arg Ser  Gln Arg Arg Ala Arg  Ser Ser Ala Arg Arg  Cys Trp Pro
    7685                 7690                 7695


Ala Ala  Pro Arg Cys Ala Pro  Ser Gly Ser Gly Ser  Trp Pro Gly
    7700                 7705                 7710


Arg Gly  Ser Pro Ser Ala Arg  Ala Ala Arg Ser Arg  Ser Pro His
    7715                 7720                 7725


Pro Ser  Arg Ser Cys Ala Pro  Ser Gly Ser Ser Arg  Ser Arg Ala
    7730                 7735                 7740


Gly Thr  Ala Ala Cys Pro Arg  Pro Arg Cys Thr Arg  Ala Ala Thr
    7745                 7750                 7755


Ala Arg  Ser Arg Cys Ser Pro  Ser Ser Cys Gly Arg  Ser Gly Ser
    7760                 7765                 7770


Ala Ser  Ala Arg Ser Pro Ala  Gly Ser Gly Pro Ser  Ser Trp Ser
    7775                 7780                 7785


Gly Ser  Cys Cys Trp Arg Ser  Ala Glu Cys Arg Gly  Ala Pro Arg
    7790                 7795                 7800


Ser His  Thr Gly Gly Arg Tyr  Gly Gly Thr Pro Arg  Pro Ala Arg
    7805                 7810                 7815


Ala Ser  Ala Gly Arg Arg Thr  Ser Gly Arg Ser Pro  Arg Gly Thr
    7820                 7825                 7830


Gly Pro  Ser Ala Ala Ser Ser  Leu Pro Cys Pro Ser  Pro Arg Pro
    7835                 7840                 7845


Lys Arg  Ser Ala Gly Ser Gly  Gly Ser Ser Pro Leu  Ser Ser Ser
    7850                 7855                 7860


Pro Pro  Pro Lys Ser Gly Gly  Arg Ser Arg Pro Gly  Ser Gln Thr
    7865                 7870                 7875
```

```
Leu Ala  Cys Arg Pro Ser Arg  Cys Ala Arg Gly Glu  Ser Ser Pro
    7880                 7885                 7890


Arg Pro  Pro Ala Pro Pro Arg  Pro Ala Phe Arg Pro  Arg Cys Pro
    7895                 7900                 7905


Gly Cys  Leu Ala Lys Ala His  Ala Trp Ser Cys Gly  Val Ser Phe
    7910                 7915                 7920


Trp Ala  Ala Glu Ala Ala Ala  Glu Thr Cys Trp Ala  Ser Ala Ser
    7925                 7930                 7935


Ser Arg  Ser Pro Arg Leu Phe  Leu Leu Leu Gly Arg  Arg Pro Arg
    7940                 7945                 7950


Pro Arg  Gly Gly Arg His Ala  Ser Ser Gly Ala Glu  Ala Glu Ala
    7955                 7960                 7965


Thr Gly  Ser Arg Gly Ser Ala  Gly Gly Trp Gln Ser  Pro Phe Arg
    7970                 7975                 7980


Val Arg  Gly Cys Ala Pro Gly  Gly Ala Ala Leu Thr  Asp Phe Leu
    7985                 7990                 7995


Arg Gly  Arg Pro Leu Cys Ser  Pro Arg Glu Gln Ala  Trp Arg Leu
    8000                 8005                 8010


Ser His  Arg Arg Gln His Arg  His Leu Pro Pro Pro  Pro Pro Thr
    8015                 8020                 8025


Arg Thr  Ser Ser Ser Arg Met  Lys Ala Pro Pro Arg  Arg Pro Ala
    8030                 8035                 8040


Pro Pro  Pro Thr Pro Gln Pro  Gln Thr Cys Lys Arg  Trp Arg Asn
    8045                 8050                 8055


Pro Ser  Arg Leu Thr Trp Ala  Thr Arg Pro Arg Ser  Thr Arg Arg
    8060                 8065                 8070
```

```
Ser Trp  Gln Arg Ala Phe Gln  Pro Arg Lys Arg Thr  Thr Lys Ser
    8075                 8080                 8085

Ser Gln  Ser Arg Lys Gln Arg  Ala Ser Arg Thr Arg  Leu Gly Ser
    8090                 8095                 8100

Ser Met  Ala Thr Thr Ala Gly  Gln Arg Thr Cys Ser  Ser Ser Ile
    8105                 8110                 8115

Trp Pro  Ala Asn Ala Ser Ser  Ser Arg Thr Arg Cys  Ser Thr Ala
    8120                 8125                 8130

Pro Arg  Cys Pro Ser Ala Trp  Arg Ser Ser Ala Ala  Pro Thr Ser
    8135                 8140                 8145

Ala Thr  Ser Ser Arg Arg Ala  Cys Pro Pro Ser Ala  Ser Pro Thr
    8150                 8155                 8160

Ala Pro  Ala Ser Pro Thr Arg  Ala Ser Thr Ser Thr  Arg Ser Ser
    8165                 8170                 8175

Arg Cys  Pro Arg Pro Trp Pro  Pro Thr Thr Ser Phe  Ser Arg Thr
    8180                 8185                 8190

Lys Gly  Ser Pro Ser Pro Ala  Ala Pro Thr Ala Pro  Ala Pro Thr
    8195                 8200                 8205

Pro Cys  Ser Thr Trp Ala Pro  Ala Pro Ala Tyr Leu  Ile Ser Pro
    8210                 8215                 8220

Pro Trp  Lys Arg Phe Pro Arg  Ser Ser Arg Val Trp  Ala Ala Thr
    8225                 8230                 8235

Arg Leu  Gly Pro Arg Thr Leu  Cys Lys Glu Ala Glu  Arg Ser Met
    8240                 8245                 8250

Ser Thr  Thr Ala Pro Trp Trp  Ser Trp Lys Ala Thr  Thr Arg Ala
    8255                 8260                 8265
```

```
Trp Arg  Ser Ser Ser Ala Arg  Ser Ser Pro Thr Ser  Pro Thr Arg
    8270                 8275                 8280

Arg Ser  Thr Cys Pro Pro Arg  Ser Ala Pro Ser Trp  Thr Arg Cys
    8285                 8290                 8295

Ser Ser  Ser Ala Pro Arg Pro  Ser Arg Arg Arg Arg  Cys Arg Thr
    8300                 8305                 8310

Pro Arg  Ala Arg Thr Arg Ala  Ser Pro Trp Ser Ala  Thr Ser Ser
    8315                 8320                 8325

Trp Arg  Ala Gly Trp Glu Arg  Val Ala Pro Pro Arg  Ala Trp Lys
    8330                 8335                 8340

Ser Gly  Ala Ser Ser Trp Pro  Trp Ser Trp Pro Trp  Ser Trp Ser
    8345                 8350                 8355

Val Cys  Ala Ala Ser Ser Pro  Thr Arg Arg Pro Cys  Ala Arg Ser
    8360                 8365                 8370

Arg Arg  Thr Cys Thr Thr Ser  Ser Asp Thr Gly Ser  Cys Ala Arg
    8375                 8380                 8385

Pro Ala  Arg Ser Pro Thr Trp  Ser Pro Thr Trp Ser  Pro Thr Trp
    8390                 8395                 8400

Ala Ser  Cys Thr Arg Thr Ala  Trp Gly Arg Thr Cys  Cys Thr Pro
    8405                 8410                 8415

Pro Cys  Ala Gly Arg Pro Ala  Ala Thr Thr Ser Ala  Thr Ala Ser
    8420                 8425                 8430

Thr Cys  Thr Ser Ala Thr Pro  Gly Arg Arg Ala Trp  Ala Cys Gly
    8435                 8440                 8445

Ser Ser  Ala Trp Arg Ser Arg  Thr Lys Ser Ser Ala  Ser Ser Cys
    8450                 8455                 8460
```

```
Arg Arg  Thr Ser Arg Pro Cys  Gly Pro Gly Ser Thr  Ser Ala Pro
    8465                8470                8475

Pro Pro  Arg Thr Trp Pro Thr  Ser Ser Ser Pro Ser  Ala Cys Gly
    8480                8485                8490

Arg Cys  Ala Thr Gly Cys Pro  Thr Leu Ala Lys Ala  Cys Cys Lys
    8495                8500                8505

Thr Phe  Ala Leu Ser Ser Ser  Asn Ala Pro Gly Ser  Cys Pro Pro
    8510                8515                8520

Pro Ala  Pro Arg Cys Pro Arg  Thr Ser Cys Arg Pro  Ser Ala Ser
    8525                8530                8535

Ala Pro  Arg Arg Ser Gly Ala  Thr Ala Thr Cys Cys  Ala Trp Pro
    8540                8545                8550

Thr Thr  Trp Pro Thr Thr Arg  Thr Ser Arg Thr Ser  Ala Ala Arg
    8555                8560                8565

Ala Cys  Ser Ser Ala Thr Ala  Ala Ala Thr Ser Ala  Arg Arg Thr
    8570                8575                8580

Ala Pro  Trp Pro Ala Thr Pro  Ser Cys Ala Arg Pro  Arg Ser Ser
    8585                8590                8595

Ala Pro  Ser Ser Cys Lys Ala  Pro Ala Arg Ala Arg  Gly Val Asn
    8600                8605                8610

Ser Pro  Arg Gly Cys Gly Pro  Arg Pro Thr Cys Ala  Ser Ser Cys
    8615                8620                8625

Pro Arg  Thr Thr Ile Pro Ser  Arg Ser Gly Ser Thr  Arg Thr Asn
    8630                8635                8640

Pro Ser  Arg Pro Arg Pro Ser  Cys Arg Pro Ala Ser  Ser Pro Arg
    8645                8650                8655
```

```
Gly Pro  Ser Trp Pro Asn Cys  Lys Pro Ser Arg Asn  Pro Ala Lys
    8660                 8665                 8670


Asn Phe  Cys Lys Arg Ala Thr  Gly Ser Thr Trp Thr  Pro Arg Pro
    8675                 8680                 8685


Glu Arg  Ser Ser Thr Pro Ala  Ser Pro Arg Met Pro  Arg Gly Ser
    8690                 8695                 8700


Ser Lys  Lys Leu Lys Val Glu  Leu Pro Pro Pro Pro  Glu Asp Leu
    8705                 8710                 8715


Glu Glu  Asp Trp Glu Ser Ser  Gln Ala Glu Glu Glu  Glu Met Glu
    8720                 8725                 8730


Asp Trp  Asp Ser Thr Gln Ala  Glu Glu Asp Ser Leu  Gln Asp Ser
    8735                 8740                 8745


Leu Glu  Glu Glu Asp Glu Val  Glu Glu Ala Glu Glu  Glu Ala Ala
    8750                 8755                 8760


Ala Ala  Arg Pro Ser Ser Ser  Ala Glu Glu Glu Lys  Ala Ser Ser
    8765                 8770                 8775


Thr Asp  Thr Ile Ser Ala Pro  Gly Arg Gly Arg Gly  Gly Arg Ala
    8780                 8785                 8790


His Ser  Arg Trp Asp Glu Thr  Gly Arg Phe Pro Asn  Pro Thr Thr
    8795                 8800                 8805


Gln Thr  Gly Lys Lys Glu Arg  Gln Gly Tyr Lys Ser  Trp Arg Gly
    8810                 8815                 8820


His Lys  Asn Ala Ile Val Ser  Cys Leu Gln Ala Cys  Gly Gly Asn
    8825                 8830                 8835


Ile Ser  Phe Thr Arg Arg Tyr  Leu Leu Phe His Arg  Gly Val Asn
    8840                 8845                 8850
```

```
Phe Pro  Arg Asn Ile Leu His  Tyr Tyr Arg His Leu  His Ser Pro
    8855                 8860                 8865

Tyr Tyr  Cys Phe Gln Glu Glu  Ala Glu Thr Gln Gln  Gln Gln Gln
    8870                 8875                 8880

Gln Gln  Lys Thr Ser Gly Ser  Ser Lys Ile His Ser  Gly Gly Arg
    8885                 8890                 8895

Trp Thr  Glu Asp Arg Gly Glu  Arg Ala Gly Ala Asp  Pro Gly Ala
    8900                 8905                 8910

Glu Glu  Pro Asp Leu Ser His  Pro Leu Cys His Leu  Pro Ala Glu
    8915                 8920                 8925

Ser Gly  Ala Arg Ala Gly Thr  Glu Ser Gln Glu Pro  Phe Ser Ala
    8930                 8935                 8940

Leu Ala  His Pro Gln Leu Ser  Val Ser Gln Glu Arg  Arg Pro Thr
    8945                 8950                 8955

Ser Ala  His Ser Arg Gly Arg  Arg Gly Ser Leu Gln  Gln Val Leu
    8960                 8965                 8970

Arg Ala  His Ser Arg Val Ala  Arg Ala Arg Pro His  Thr Glu Lys
    8975                 8980                 8985

Gly Gly  Asn Tyr Val Thr Thr  Cys Ala Leu Arg Pro  Thr Ile Ile
    8990                 8995                 9000

Met Ser  Lys Glu Ile Pro Thr  Pro Tyr Met Trp Ser  Tyr Gln Pro
    9005                 9010                 9015

Gln Met  Gly Leu Ala Ala Gly  Ala Ala Gln Asp Tyr  Ser Thr Arg
    9020                 9025                 9030

Met Asn  Trp Leu Ser Ala Gly  Pro Ala Met Ile Ser  Arg Val Asn
    9035                 9040                 9045
```

```
Asp Ile  Arg Ala His Arg Asn  Gln Ile Leu Leu Glu  Gln Ser Ala
    9050                9055                9060

Ile Thr  Ala Thr Pro Arg His  His Leu Asn Pro Arg  Asn Trp Pro
    9065                9070                9075

Ala Ala  Leu Val Tyr Gln Glu  Ile Pro Gln Pro Thr  Thr Val Leu
    9080                9085                9090

Leu Pro  Arg Asp Ala Gln Ala  Glu Val Gln Leu Thr  Asn Ser Gly
    9095                9100                9105

Val Gln  Leu Ala Gly Gly Ala  Ala Leu Cys Arg His  Arg Pro Ala
    9110                9115                9120

Gln Gly  Ile Lys Arg Leu Val  Ile Arg Gly Arg Gly  Thr Gln Leu
    9125                9130                9135

Asn Asp  Glu Val Val Ser Ser  Ser Leu Gly Leu Arg  Pro Asp Gly
    9140                9145                9150

Val Phe  Gln Leu Ala Gly Ser  Gly Arg Ser Ser Phe  Thr Pro Arg
    9155                9160                9165

Gln Ala  Val Leu Thr Leu Glu  Ser Ser Ser Ser Gln  Pro Arg Ser
    9170                9175                9180

Gly Gly  Ile Gly Thr Leu Gln  Phe Val Glu Glu Phe  Thr Pro Ser
    9185                9190                9195

Val Tyr  Phe Asn Pro Phe Ser  Gly Ser Pro Gly His  Tyr Pro Asp
    9200                9205                9210

Glu Phe  Ile Pro Asn Phe Asp  Ala Ile Ser Glu Ser  Val Asp Gly
    9215                9220                9225

Tyr Asp  Met Ser His Gly Gly  Ala Ala Asp Leu Ala  Arg Leu Arg
    9230                9235                9240
```

```
His Leu  Asp His Cys Arg Arg  Phe Arg Cys Phe Ala  Arg Asp Leu
    9245                 9250                 9255


Ala Glu  Phe Ala Tyr Phe Glu  Leu Pro Glu Glu His  Pro Gln Gly
    9260                 9265                 9270


Pro Ala  His Gly Val Arg Ile  Val Val Glu Gly Gly  Leu Asp Ser
    9275                 9280                 9285


His Leu  Leu Arg Ile Phe Ser  Gln Arg Pro Ile Leu  Ala Glu Arg
    9290                 9295                 9300


Glu Gln  Gly Gln Thr Leu Leu  Thr Leu Tyr Cys Ile  Cys Asn His
    9305                 9310                 9315


Pro Gly  Leu His Glu Ser Leu  Cys Cys Leu Leu Cys  Thr Glu Tyr
    9320                 9325                 9330


Asn Lys  Ser Asp Gln Arg Leu  Leu Arg Thr Ser Val  Cys Ser Cys
    9335                 9340                 9345


Tyr Gln  Pro Val Pro Val Leu  His Arg Glu Arg Asp  Arg Ala Pro
    9350                 9355                 9360


Ala Pro  Val Ala Pro Gln Glu  Val Pro His Leu Ala  Val Pro Gly
    9365                 9370                 9375


Leu Ser  Asp Arg Arg Cys Gln  Pro Leu Arg Gln Arg  Arg Ser Pro
    9380                 9385                 9390


Ala Glu  Arg Pro Cys Gln Pro  Tyr Phe Phe His Pro  Gln Lys Gln
    9395                 9400                 9405


Ala Pro  Ala Leu Pro Thr Leu  Pro Pro Arg Asp Leu  Ser Val Arg
    9410                 9415                 9420


Leu Gly  Thr Leu Pro Ser His  Leu Pro Pro Asp Pro  Glu Tyr His
    9425                 9430                 9435
```

```
Ser Val  Ala Pro Arg Tyr Gln  Pro Asn Tyr Pro Pro  Thr Pro Pro
    9440                9445                9450

Ser Arg  Pro Arg Thr Cys Thr  Glu Leu Glu Lys Tyr  Ala Thr Ile
    9455                9460                9465

His Ala  His Ile Arg Leu Gly  Arg Ala Thr Ala Thr  His Ala Pro
    9470                9475                9480

Arg Tyr  Leu Leu Gln Ser Asn  Arg Arg Arg Leu Thr  His Trp Pro
    9485                9490                9495

Thr Thr  Thr Ser Thr Thr Phe  Ser Trp Thr Trp Thr  Ala Ala Pro
    9500                9505                9510

Arg Ser  Ser Asp Ser Pro Asn  Phe Ala Phe Ala Ser  Ser Arg Arg
    9515                9520                9525

Glu Pro  Ser Arg Ser Cys Arg  Thr Ala Pro Ser Thr  Ser Ala Arg
    9530                9535                9540

Lys Ala  Ser Ser Ala Trp Asn  Arg Pro Arg Ser Pro  Thr Arg Ser
    9545                9550                9555

Pro Arg  Pro Thr Ile Ala Ser  Pro Thr Ser Ser Cys  Ser Ser Ala
    9560                9565                9570

Arg Ser  Ser Pro Ala Trp Ser  Glu Ser Thr Pro Ser  Ser Ser Pro
    9575                9580                9585

Ser Ser  Arg Ala Ile Pro Arg  Gly Ala Ser Thr Ala  Pro Ala Thr
    9590                9595                9600

Pro Pro  Thr Ala Ser Thr Leu  Ser Arg Pro Ser Ala  Ala Ser Ala
    9605                9610                9615

Thr Ser  Ser Pro Thr Asn His  Pro Leu Ile Gln Asn  Lys Tyr His
    9620                9625                9630
```

```
Ile Asp  Asp Asp Leu Asn Lys  Lys Ser Phe Asp Leu  Lys Arg Tyr
    9635                 9640                 9645

Asn His  Ile Asp Asp Leu Ser  Phe Lys Lys Arg Ile  Thr Tyr Leu
    9650                 9655                 9660

Lys Ser  Asp Thr Arg Ser Leu  Ser Met Phe Ser Ala  Asn Thr Thr
    9665                 9670                 9675

Ser Leu  Pro Ser Ser Gln Leu  Trp Tyr Cys Arg Pro  Arg Arg Ala
    9680                 9685                 9690

Ala Asn  Phe Leu His Thr Leu  Lys Gly Met Ser Asn  Ser Ser Cys
    9695                 9700                 9705

Pro Ser  Ile Phe Ile Leu Ser  Ser Ile Arg Cys Pro  Lys Ser Ala
    9710                 9715                 9720

Ser Gly  Trp Met Met Thr Ser  Thr Pro Ser Thr Pro  Thr Met Gln
    9725                 9730                 9735

Thr Thr  His Arg Pro Cys Pro  Ser Ser Thr Pro Pro  Ser Ser Leu
    9740                 9745                 9750

Gln Met  Asp Ser Lys Arg Ser  Pro Trp Gly Cys Cys  Pro Cys Asp
    9755                 9760                 9765

Trp Leu  Thr Pro Ser Pro Pro  Arg Thr Gly Lys Ser  Pro Ser Ser
    9770                 9775                 9780

Trp Glu  Arg Gly Trp Thr Ser  Thr Pro Arg Glu Asn  Ser Ser Pro
    9785                 9790                 9795

Thr Arg  Pro Pro Arg Pro Pro  Pro Leu Ser Val Phe  Pro Thr Thr
    9800                 9805                 9810

Pro Phe  Pro Leu Thr Trp Ile  Pro Leu Phe Ile Pro  Lys Met Glu
    9815                 9820                 9825
```

```
Asn Tyr  Pro Tyr Lys Phe Leu  His Arg Thr Tyr Asn  Gln Pro Phe
    9830                9835                9840

Thr His  Leu Leu Met Asp Gln  Val Asp Val Val Ala  Leu Leu Leu
    9845                9850                9855

Gln Tyr  Ser Trp Pro Leu His  Ser Leu Leu Met Lys  Lys Glu Ile
    9860                9865                9870

Leu Lys  Leu Thr Pro Val Val  His Gln Leu Met Gln  Val Asp Leu
    9875                9880                9885

Val Ser  Thr Ala Lys Glu Gly  Ser Leu Ser Leu Pro  Gln Glu Met
    9890                9895                9900

Gln Leu  Lys Ala Thr Ala Gly  Leu Lys Val Asp Leu  Lys Val Met
    9905                9910                9915

Ala Leu  Gln Thr Leu Ala Glu  Asp Trp Asn Leu Glu  Pro Leu Val
    9920                9925                9930

Gln Arg  Leu Met Ser Gln Met  His Thr Gln Phe Lys  Leu Asn Trp
    9935                9940                9945

Val Leu  Ala Leu Pro Leu Thr  Val Gln Ala Pro Leu  Leu Leu Gly
    9950                9955                9960

Thr Lys  Arg Met Ile Asn Leu  His Tyr Gly Pro Gln  Pro Thr Pro
    9965                9970                9975

Arg Gln  Ile Ala Lys Tyr Thr  Leu Lys Lys Met Pro  Asn Ser His
    9980                9985                9990

Phe Ala  Gln Ser Val Glu Val   Lys Phe Trp Val Leu   Leu Tyr Trp
    9995                10000                10005

Gln Ile   Met Glu Val Ser Thr   Gln Ser Gln Thr Gln   Ala Leu His
    10010                10015                10020
```

```
Ser Ser   Pro Ser Ser Leu Met   Gln Val Glu Phe Cys   Ala Ala Pro
    10025                10030                10035

His Thr   Lys Asn Ile Gly Thr   Ser Glu Arg Glu Met   Leu His Leu
    10040                10045                10050

Leu Ser   Pro Ile Leu Met Leu   Val Leu Cys Leu Thr   Arg Pro Ile
    10055                10060                10065

Leu Lys   Thr His Leu Gln Leu   Gln Lys Ala Ile Leu   Ser Val Lys
    10070                10075                10080

Phe Ile   Ser Met Gly Met Arg   Pro Asn His Cys Leu   Leu Leu Leu
    10085                10090                10095

Met Lys   Leu Arg Met Gln Leu   Ala Pro Thr Val Ser   Leu Phe Asn
    10100                10105                10110

Gly Asn   Gly Ile Val Leu Ser   Thr Gln Val Lys His   Leu Leu Pro
    10115                10120                10125

Ala Pro   Ser Pro Ser Pro Thr   Ser Pro Lys Asn Glu   His Cys Ile
    10130                10135                10140

Pro Pro   Cys Met Pro Thr Leu   Pro Thr Pro Leu Cys   Leu Trp Lys
    10145                10150                10155

Lys Leu   Ser Thr Lys Asn Lys   Val Gln Val Phe Tyr   Phe Asn Ser
    10160                10165                10170

Phe Thr   Gly Phe Glu Gln Leu   Phe Phe Leu His Pro   Pro Arg Thr
    10175                10180                10185

Trp Asn   Thr Pro Pro Ser Pro   Pro Ala Gln Pro Thr   Ser Glu Cys
    10190                10195                10200

His Trp   Trp Thr Cys Phe Trp   Ser Pro Arg Ser Thr   Gln Phe Gln
    10205                10210                10215
```

```
Ser Glu   Pro Val Ser Gly Arg   Ser Gly Arg Asn Pro   Pro Gly Thr
    10220                 10225                 10230

Pro Ala   Ser Ala Pro His Ser   Ser Thr Ala Glu Asp   Cys Pro Arg
    10235                 10240                 10245

Trp Ser   Gly Ser Arg Leu Ser   Gly Arg Ser Arg Arg   Ala Ala Val
    10250                 10255                 10260

Gly Ile   Ile Val Arg Glu Arg   Asp Arg Pro Val Val   Ser His Gln
    10265                 10270                 10275

Ala Pro   Gln Gln Ser Leu Pro   Pro Pro Leu Arg Gln   Ala Ala Ala
    10280                 10285                 10290

Gln Gly   Val Arg Val Gln Gly   Leu Pro Gln His Asp   Ala His Gly
    10295                 10300                 10305

Pro Gln   His Gln Ser Ser Gly   Ala Ala Gly Ala Ala   Ala His Ala
    10310                 10315                 10320

Asp Leu   Ala Gln Val Ala Ala   Val Arg Ala Thr Gln   Asp His Gln
    10325                 10330                 10335

Val Val   Gln Gln Ser Ile Val   Gln His Ala Pro Ala   Glu Thr His
    10340                 10345                 10350

Arg Gly   Lys Asp Ala Thr His   Val Ala Val Val Pro   Asp Pro Gln
    10355                 10360                 10365

Val Asn   Gln Val Ala Leu Pro   Pro Glu His Ala Ala   His Val His
    10370                 10375                 10380

Asp Leu   Leu Gly His Val Ala   Val His His Leu Pro   Val Pro His
    10385                 10390                 10395

His Pro   Leu Val Glu His Ala   Ala Pro Asp Asp Pro   Ala Glu Pro
    10400                 10405                 10410
```

```
Gln Gly   Gln His Arg Pro Ala   Arg His Ala Ala Lys   Arg Pro Arg
    10415                 10420                 10425

Val Pro   Ala Met Ala Met Glu   Asp Pro Pro Leu Val   Pro Val Asp
    10430                 10435                 10440

His Leu   Gly Ala Glu Gln Val   Tyr Val Gly Thr Ala   Gln Ala Tyr
    10445                 10450                 10455

Ala His   Ala Ser Leu Gln His   Ser Gln Leu Leu Gly   Gly Gln Asn
    10460                 10465                 10470

His Ile   Pro Gly His Gly Glu   Leu Leu Gln Asp Ser   Glu Pro Arg
    10475                 10480                 10485

Arg Thr   Gly Gln Ser Ser His   Ile Thr Tyr Ile Val   His Gly Gln
    10490                 10495                 10500

Gly Ile   Ala Ile Arg Gln His   Arg Val Ile Leu His   Gln Arg Ser
    10505                 10510                 10515

Ala Gly   Leu Gly Leu Leu Thr   Ala Trp Gly Gly Arg   Pro Ile Arg
    10520                 10525                 10530

Val Met   Ala Gly Arg Gly Ser   Cys Ser Arg Pro Cys   His Asp Ala
    10535                 10540                 10545

Val Ala   Phe Gly His Phe Arg   Thr Cys Cys Ser Arg   Thr Trp Ser
    10550                 10555                 10560

Gly Arg   Cys Thr Pro Ile Ala   Gly Gly Gly Pro Gly   Ala Trp Asn
    10565                 10570                 10575

Ala Arg   Cys Asn Cys Lys Thr   Ala Thr Leu Ser Asp   Arg Ala Ala
    10580                 10585                 10590

Asp Leu   Gly Pro Gln Glu Arg   Ser His His Ala Leu   Ser His Arg
    10595                 10600                 10605
```

```
Pro Pro   Trp Asn Gly Pro Asp   Pro Ala Arg Cys Asn   Phe Val Gly
    10610                 10615                 10620


Phe Arg   Arg Arg Gly Arg Glu   Glu Gln Glu Glu Pro   Leu Thr Phe
    10625                 10630                 10635


Asn Pro   Asn Gly Leu Gly Ala   Leu Gln Asn Glu Gly   Arg Gly Asp
    10640                 10645                 10650


Gly Thr   Ser Arg Pro Arg Cys   Val Gly Gly Lys Gln   Pro Gly Gln
    10655                 10660                 10665


Arg Tyr   Gly Ser Arg Asp Val   Pro Arg Trp Leu Pro   Ala Lys Pro
    10670                 10675                 10680


Pro Arg   Ala His Pro Glu Thr   Arg Gln Arg Lys Arg   Glu Gly Ser
    10685                 10690                 10695


Leu Ile   Pro Gln Ser Ser Cys   Tyr Thr Pro Ala Pro   Ser Pro Asp
    10700                 10705                 10710


Asn Phe   His Phe Ser Ser Leu   Glu Phe Glu Leu Val   Pro Glu Val
    10715                 10720                 10725


Asn Pro   Ser Gln Pro Arg Ala   Arg Ala Glu Arg Pro   Pro Pro Ala
    10730                 10735                 10740


Phe Leu   Ser Thr Pro Ser Phe   Gln Asp Ile Leu Leu   Leu Val His
    10745                 10750                 10755


Leu Gln   Gln Ile Asp Lys Arg   Asn Ile Lys Ile Ser   Ala Ala Ile
    10760                 10765                 10770


Pro Lys   Leu Leu Pro Gln Gln   Leu Val Leu Phe His   Ile Leu Ser
    10775                 10780                 10785


Glu Ile   Phe Ser His Arg Thr   Thr Arg Asn Lys Ile   Arg Ala Ser
    10790                 10795                 10800
```

```
His Ser   Thr Asp Lys Pro Lys   Ser Ser Pro Val Ser   Ile Ala Lys
    10805                10810                10815

Cys Lys   Thr Ala Ile Ser Met   Leu Ala Arg Pro Gly   Asp Ile Phe
    10820                10825                10830

Gln Ile   Thr Gly Gln Lys Ile   Thr Gln Ala Ile Phe   Lys Lys Ile
    10835                10840                10845

Asn Lys   Arg Lys Ile Leu Gln   Val His Val Ser Leu   Gly Asn Asn
    10850                10855                10860

Asp Glu   Val Asn Ala Ser Gly   Ala Phe Gln His Gly   Leu Ala Asp
    10865                10870                10875

Leu Lys   Thr Lys Asn Lys Thr   Leu Asn His Ala Ser   Leu Ala Asn
    10880                10885                10890

Arg Trp   Val Asn Arg Ser Leu   Gln His Gln Ala Gly   His Gly Val
    10895                10900                10905

Ser Gly   Ala Thr Leu Val Lys   Ile Val Ala Met Ile   Glu Asn His
    10910                10915                10920

His Arg   Glu Thr Phe Pro Val   Ala Gly Val Asn Asp   Ser Thr Arg
    10925                10930                10935

Ile His   Pro Arg Asn Ile Gly   Val Arg Glu Lys Lys   Ala Pro Glu
    10940                10945                10950

Glu Ala   Ile Arg His Tyr Asn   Ala Gln Ser Gln Val   Gln Gln Ser
    10955                10960                10965

Asp Ala   Met Arg Met Lys His   Lys Ile Leu Arg Cys   Val Gln Asn
    10970                10975                10980

Val Ile   Thr Pro Leu Leu His   Arg Gln Arg Ser Pro   Arg Ser Leu
    10985                10990                10995
```

```
Gln Ile   His Ile Gln Ser Leu   Ser Val His Ser Leu   Pro Ser Ser
    11000                11005                11010


Ser Thr   Gln Gln Ala Gln Glu   Ser Glu Lys Gly Ala   Leu Thr Cys
    11015                11020                11025


Pro Pro   Ala Leu Cys Ser Ile   Tyr Ser Pro Asp Leu   His Arg Lys
    11030                11035                11040


Gly Gln   Ser Leu Lys Ile Pro   Ala Lys Ser His Thr   Pro Ser Thr
    11045                11050                11055


Arg Pro   Glu Thr Gly Asp Thr   Leu Lys Lys Ile Arg   Ala Leu Pro
    11060                11065                11070


Gln Thr   Pro Lys Leu Pro Ser   Phe Pro Gly Ser His   Ala Thr Ser
    11075                11080                11085


Ser Glu   Phe Asp Phe Gln Ile   Pro Ser Thr Val Lys   Asn Val Thr
    11090                11095                11100


Arg Pro   Ala Pro Asn Gly Arg   Pro Ser Leu Gly Gln   Ser Pro Ser
    11105                11110                11115


Ser Leu   Pro Lys Phe Lys Gln   Leu Ile Cys Ile Leu   Thr Arg Thr
    11120                11125                11130


Lys Ser   Leu Arg Tyr Ile Ile   Asp Asp
    11135                11140


<210>  16
<211>  11128
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  Artificially Synthesized


<220>
<221>  misc_feature
<222>  (1997)..(1997)
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<223> Xaa can be any naturally occurring amino acid

<400> 16

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His His Gln Tyr Thr Ser Asn Phe Trp Cys Ala Leu Ile Cys Lys Ala
1               5                  10                  15


Val Ile Trp Gly Gly Arg Lys Val Ile Gly Arg Glu Thr Gly Asp Arg
            20                  25                  30


Gly Arg Gly Gly Arg Phe Asp Asp Val Ala Val Arg Arg Ser Arg Phe
        35                  40                  45


Ala Ser Ser Arg Gly Lys Ser Asp Val Lys Arg Gly Val Val Thr Arg
    50                  55                  60


Lys Tyr Ser Ile Phe Pro Arg Ser Leu Thr Gly Asn Glu Val Phe Leu
65                  70                  75                  80


Gly Gly Cys Lys Lys Arg Ala Ile Phe Ala Arg Lys Leu Asn Glu Glu
                85                  90                  95


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


Gly Arg Val Asp Phe Asp Arg Leu Arg Gly Gly Phe Asp Tyr Arg Ile
        115                 120                 125


Phe His Leu Asn Phe Arg Val Arg Cys Gln Ser Pro Val Phe Leu Arg
    130                 135                 140


Thr Ile Ser Phe Pro Arg Lys Cys His Leu Thr Val Thr Ile Thr Val
145                 150                 155                 160


Leu Arg Arg Lys Leu Arg Ser Pro Asp Pro Leu Trp Cys Thr Leu Ser
                165                 170                 175


Thr Ile Cys Ser Asp Ala Ala Leu Ser Gln Tyr Leu Leu Pro Ala Cys
            180                 185                 190
```

```
Val Leu Glu Val Ala Glu Cys Ala Ser Lys Ile Ala Thr Thr Arg Gln
        195                 200                 205


Gly Leu Thr Asp Asn Cys Met Lys Asn Leu Leu Arg Val Arg Arg Phe
    210                 215                 220


Ala Leu Leu Arg Asp Val Arg Ala Arg Tyr Thr Arg His Leu Leu Thr
225                 230                 235                 240


Ser Met Pro Ser Thr Pro Pro Ile Asp Val Asn Asp Gly Lys Trp Pro
                245                 250                 255


Ala Trp His Tyr Ala Gln Tyr Met Thr Leu Trp Asp Phe Pro Thr Trp
            260                 265                 270


Gln Tyr Ile Tyr Val Leu Val Ile Ala Ile Thr Met Val Met Arg Phe
        275                 280                 285


Trp Gln Tyr Ile Asn Gly Arg Gly Arg Phe Asp Ser Arg Gly Phe Pro
    290                 295                 300


Ser Leu His Pro Ile Asp Val Asn Gly Ser Leu Phe Trp His Gln Asn
305                 310                 315                 320


Gln Arg Asp Phe Pro Lys Cys Arg Asn Asn Ser Ala Pro Leu Thr Gln
                325                 330                 335


Met Gly Gly Arg Arg Val Arg Trp Glu Val Tyr Ile Ser Arg Ala Arg
            340                 345                 350


Leu Val Asn Arg Gln Ile Thr Arg Ser Phe Ile Ala Val Val Tyr His
        355                 360                 365


Ser Ile Ala Asn Ala Val Ser Ala Ser Asp Thr Thr Val Ser Asn Leu
    370                 375                 380


Arg Leu Glu Phe Asp Ala Thr Met Arg Val Arg Gly Ile Pro Arg Asn
385                 390                 395                 400
```

```
Trp Pro Gln Trp Trp Ile Trp Gly Ile Leu Gly Phe Trp Met Ile Ile
                405                 410                 415

Ile Cys Arg Val Val Gly Asn Leu Asp Leu Trp Val Thr Val Tyr Tyr
            420                 425                 430

Gly Val Pro Val Trp Lys Glu Ala Lys Thr Thr Leu Phe Cys Ala Ser
        435                 440                 445

Asp Ala Lys Ala Tyr Asp Lys Glu Val His Asn Val Trp Ala Thr His
    450                 455                 460

Ala Cys Val Pro Thr Asp Pro Asn Pro Gln Glu Ile Val Leu Glu Asn
465                 470                 475                 480

Val Thr Glu Asn Phe Asn Met Trp Lys Asn Asp Met Val Asp Gln Met
                485                 490                 495

His Glu Asp Ile Ile Ser Leu Trp Asp Gln Ser Leu Lys Pro Cys Val
            500                 505                 510

Lys Leu Thr Pro Leu Cys Val Thr Leu Asn Cys Lys Asn Val Asn Ile
        515                 520                 525

Ser Ala Asn Ala Asn Ala Thr Ala Thr Leu Asn Ser Ser Met Asn Gly
    530                 535                 540

Glu Ile Lys Asn Cys Ser Phe Asn Thr Thr Thr Glu Leu Arg Asp Lys
545                 550                 555                 560

Lys Gln Lys Val Tyr Ala Leu Phe Tyr Lys Pro Asp Val Val Pro Leu
                565                 570                 575

Asn Gly Gly Glu His Asn Glu Thr Gly Glu Tyr Ile Leu Ile Asn Cys
            580                 585                 590

Asn Ser Ser Thr Ile Thr Gln Ala Cys Pro Lys Val Ser Phe Asp Pro
        595                 600                 605
```

```
Ile Pro Ile His Tyr Cys Ala Pro Ala Gly Tyr Ala Ile Leu Lys Cys
    610                 615                 620

Asn Asn Lys Thr Phe Asn Gly Thr Gly Pro Cys Asn Asn Val Ser Thr
625                 630                 635                 640

Val Gln Cys Thr His Gly Ile Lys Pro Val Val Ser Thr Gln Leu Leu
                645                 650                 655

Leu Asn Gly Ser Leu Ala Glu Glu Glu Ile Ile Val Arg Ser Glu Asn
            660                 665                 670

Leu Thr Asn Asn Ile Lys Thr Ile Ile Val His Leu Asn Lys Ser Val
        675                 680                 685

Glu Ile Lys Cys Thr Arg Pro Asn Asn Asn Thr Arg Lys Ser Val Arg
    690                 695                 700

Ile Gly Pro Gly Gln Thr Phe Tyr Ala Thr Gly Glu Ile Ile Gly Asp
705                 710                 715                 720

Ile Arg Glu Ala His Cys Asn Ile Ser Arg Glu Thr Trp Asn Ser Thr
                725                 730                 735

Leu Ile Gln Val Lys Glu Lys Leu Arg Glu His Tyr Asn Lys Thr Ile
            740                 745                 750

Lys Phe Glu Pro Ser Ser Gly Gly Asp Leu Glu Val Thr Thr His Ser
        755                 760                 765

Phe Asn Cys Arg Gly Glu Phe Phe Tyr Cys Asp Thr Thr Lys Leu Phe
    770                 775                 780

Asn Glu Thr Lys Leu Phe Asn Glu Ser Glu Tyr Val Asp Asn Lys Thr
785                 790                 795                 800

Ile Ile Leu Pro Cys Arg Ile Lys Gln Ile Ile Asn Met Trp Gln Glu
                805                 810                 815
```

```
Val Gly Arg Ala Met Tyr Ala Pro Pro Ile Glu Gly Asn Ile Thr Cys
            820                 825                 830

Lys Ser Asn Ile Thr Gly Leu Leu Leu Thr Trp Asp Gly Gly Glu Asn
        835                 840                 845

Ser Thr Glu Gly Val Phe Arg Pro Gly Gly Gly Asn Met Lys Asp Asn
    850                 855                 860

Trp Arg Ser Glu Leu Tyr Lys Tyr Lys Val Val Glu Ile Lys Pro Leu
865                 870                 875                 880

Gly Val Ala Pro Thr Lys Ser Lys Arg Lys Val Val Gly Arg Glu Lys
                885                 890                 895

Arg Ala Val Gly Leu Gly Ala Val Leu Leu Gly Phe Leu Gly Ala Ala
            900                 905                 910

Gly Ser Thr Met Gly Ala Ala Ser Ile Thr Leu Thr Val Gln Ala Arg
        915                 920                 925

Gln Leu Leu Ser Gly Ile Val Gln Gln Gln Ser Asn Leu Leu Arg Ala
    930                 935                 940

Ile Glu Ala Gln Gln His Leu Leu Gln Leu Thr Val Trp Gly Ile Lys
945                 950                 955                 960

Gln Leu Gln Thr Arg Val Leu Ala Ile Glu Arg Tyr Leu Lys Asp Gln
                965                 970                 975

Gln Leu Leu Gly Leu Trp Gly Cys Ser Gly Lys Leu Ile Cys Ala Thr
            980                 985                 990

Ala Val Pro Trp Asn Ser Ser Trp  Ser Asn Lys Ser Leu  Gly Asp Ile
        995                 1000                1005

Trp Asp  Asn Met Thr Trp Met  Gln Trp Asp Arg Glu  Ile Ser Asn
    1010                1015                1020
```

```
Tyr Thr  Asn Thr Ile Phe Arg  Leu Leu Glu Asp Ser  Gln Asn Gln
    1025                1030                1035

Gln Glu  Lys Asn Glu Lys Asp  Leu Leu Ala Leu Asp  Ser Trp Lys
    1040                1045                1050

Asn Leu  Trp Asn Trp Phe Asp  Ile Thr Asn Trp Leu  Trp Tyr Ile
    1055                1060                1065

Lys Ile  Phe Ile Met Ile Val  Gly Gly Leu Ile Gly  Leu Arg Ile
    1070                1075                1080

Ile Phe  Gly Val Leu Ala Ile  Val Lys Arg Val Arg  Gln Gly Tyr
    1085                1090                1095

Ser Pro  Leu Ser Phe Gln Thr  Leu Ile Pro Asn Pro  Arg Gly Pro
    1100                1105                1110

Asp Arg  Leu Gly Arg Ile Glu  Glu Glu Gly Gly Glu  Gln Asp Lys
    1115                1120                1125

Asp Arg  Ser Ile Arg Leu Val  Ser Gly Phe Leu Ala  Leu Ala Trp
    1130                1135                1140

Asp Asp  Leu Arg Ser Leu Cys  Leu Phe Ser Tyr His  Gln Leu Arg
    1145                1150                1155

Asp Phe  Ile Leu Thr Ala Ala  Arg Ala Ala Glu Leu  Leu Gly Arg
    1160                1165                1170

Ser Ser  Leu Arg Gly Leu Gln  Arg Gly Trp Glu Val  Leu Lys Tyr
    1175                1180                1185

Leu Gly  Asn Leu Val Gln Tyr  Trp Gly Leu Glu Leu  Lys Arg Ser
    1190                1195                1200

Ala Ile  Asn Leu Phe Asp Thr  Ile Ala Ile Ala Val  Ala Glu Gly
    1205                1210                1215
```

```
Thr Asp  Arg Ile Ile Glu Val  Ile Gln Arg Ile Cys  Arg Ala Ile
    1220                1225                1230


Arg Tyr  Ile Pro Thr Arg Ile  Arg Gln Gly Phe Glu  Ala Ala Leu
    1235                1240                1245


Leu Gly  Thr Ser Arg Val Asp  Pro Gly Gly Gln Thr  Ala Asp Gln
    1250                1255                1260


Pro Arg  Leu Cys Leu Leu Val  Ala Ser His Leu Leu  Phe Ala Pro
    1265                1270                1275


Pro Pro  Cys Leu Pro Pro Trp  Lys Val Pro Leu Pro  Leu Ser Phe
    1280                1285                1290


Pro Asn  Lys Met Arg Lys Leu  His Arg Ile Val Val  Gly Val Ile
    1295                1300                1305


Leu Phe  Trp Gly Val Gly Trp  Gly Arg Thr Ala Arg  Gly Arg Ile
    1310                1315                1320


Gly Lys  Thr Ile Ala Gly Met  Leu Gly Met Arg Trp  Ala Leu Trp
    1325                1330                1335


Leu Leu  Arg Arg Lys Glu Pro  Ala Asp Leu Gln Ile  Ile His Leu
    1340                1345                1350


Cys Arg  Val Arg Arg Lys Arg  Asn Gly Ile Met Gly  Ile Met Gly
    1355                1360                1365


Leu His  Ile Gly Gln Ile Ser  Ile Cys Trp Pro Pro  Cys Met Pro
    1370                1375                1380


Arg Thr  Pro Ala Arg His Gly  Pro Ser Ser Ser Thr  Thr Ser Pro
    1385                1390                1395


Asp Ala  Met Cys Thr Trp Gly  Pro Ala Glu Ala Cys  Ser Cys Pro
    1400                1405                1410
```

```
Thr Ser  Ala Thr Cys Asn Leu  Arg Cys Cys Trp Ser  Pro Met Pro
    1415                1420                1425


Cys Pro  Glu Ala Arg Gly Cys  Leu Thr Met Trp Ser  Cys Gly Lys
    1430                1435                1440


Phe Asp  Met Met Asn Pro Arg  Pro Gly Ala Gly Pro  Ala Asn Ala
    1445                1450                1455


Glu Ala  Ser Thr Pro Gly Phe  Ser Pro Cys Val Trp  Arg Arg Arg
    1460                1465                1470


Thr Cys  Asp Pro Ile Ile Trp  Cys Cys Pro Ala Thr  Gly Arg Ser
    1475                1480                1485


Ser Ala  Pro Ala Gly Lys Asn  Leu Thr Arg Val Ser  Ser Val Trp
    1490                1495                1500


Gly Arg  Trp Arg Ala Cys Met  Arg Gly Arg Met Thr  Lys Ile Cys
    1505                1510                1515


Val Phe  Leu Cys Val Ala Ala  Ala Ala Glu Ala Pro  Pro Leu Arg
    1520                1525                1530


Glu Gly  Tyr Ser Ala Leu Ile  Arg Gly Val Ser Pro  Pro Gly Arg
    1535                1540                1545


Glu Cys  Val Arg Met Trp Asp  Pro Arg Trp Thr Ala  Gly Pro Cys
    1550                1555                1560


Ser Pro  Arg Thr Leu Gln Pro  Pro Thr Arg Pro Ala  Pro Arg Pro
    1565                1570                1575


Trp Thr  Gln Leu Pro Pro Gln  Leu Leu Leu Pro Pro  Pro Ala Pro
    1580                1585                1590


Cys Ala  Glu Trp Pro Trp Ala  Pro Ala Thr Thr Ala  Leu Trp Trp
    1595                1600                1605
```

```
Pro Thr  Arg Leu Pro Pro Ile  Ile Pro Pro Ala Thr  Arg Arg Ser
    1610                1615                1620


Cys Cys  Cys Trp Pro Ser Ser  Arg Pro Pro Ser Ala  Trp Ala Ser
    1625                1630                1635


Pro Ser  Arg Trp Leu Ser Cys  Arg Arg Arg Arg Gly  Pro Arg Leu
    1640                1645                1650


Pro Arg  Lys Pro Asn Lys Lys  Ile Asn Lys Thr Glu  Thr Val Val
    1655                1660                1665


Asp Phe  Asn Thr Glu Ser Ile  Phe Ile Phe Phe Ala  Arg Gly Arg
    1670                1675                1680


Pro Trp  Thr Thr Gly Leu Asp  His Ala Pro Gly Gly  Phe Phe Pro
    1685                1690                1695


Gly Pro  Gly Arg Gly Gly Leu  Gly Cys Gly Thr Trp  Ala Ala Arg
    1700                1705                1710


Pro Gly  Gly Gly Gly Ser Ser  Ile Ala Gly Pro Arg  Ala Arg Gly
    1715                1720                1725


Trp Cys  Cys Lys Ser Pro Ser  His Ser Arg Gly Ala  Gly Arg Gly
    1730                1735                1740


Ala Ala  Arg Cys Pro Gly Gly  Asp Trp Pro Arg Ala  Ala Pro Trp
    1745                1750                1755


Cys Arg  Cys Arg Thr Cys Ala  Gly Arg Asp Ala Cys  Gly Gly Arg
    1760                1765                1770


Asp Ala  Ser Trp Pro Gly Ser  Asp Trp Arg Cys Ser  Arg Pro Asp
    1775                1780                1785


Pro Ala  Gly Gly Ser Cys Cys  Ala Gly Pro Pro Ala  Arg Cys Ile
    1790                1795                1800
```

```
Arg Arg  Thr Trp Gly Ile Cys  His Ala Thr Trp Lys  Gly Arg Arg
    1805                1810                1815

Glu Arg  Ile Trp Arg Arg Pro  Cys Asp Arg Pro Gly  Phe Pro Cys
    1820                1825                1830

Thr His  Pro Trp Arg Trp Ala  Arg Gly Arg Arg Pro  Gly Gln Arg
    1835                1840                1845

Arg Phe  Gly Gly Arg Thr His  Arg Ser Cys Gly Pro  Gly Ala Arg
    1850                1855                1860

His Arg  Pro Phe Ile Trp Gly  Gly Gly Cys Pro Thr  Gly Gly Arg
    1865                1870                1875

Arg Cys  Pro Arg Ser Arg Gly  Arg Ser Cys Pro Arg  Arg Ser Ala
    1880                1885                1890

Ser Pro  Arg Pro Ala Arg Arg  Gly Gly Ser Cys Pro  Pro Ala Gly
    1895                1900                1905

Arg Lys  Lys Arg Phe Pro Gly  Arg Gly Arg Ala Gly  Pro Lys Ala
    1910                1915                1920

Gly Ser  Gly Ala Ala Gly Thr  Cys Arg Ser Arg Trp  Gly Arg Arg
    1925                1930                1935

Pro Arg  Pro Ala Ala Gly Gly  Ser Gly Arg Asp Ser  Cys Arg Pro
    1940                1945                1950

Arg Gly  Gly Gly Gly Pro Pro  Arg Ser Ser Ser Arg  Ala His Ala
    1955                1960                1965

Cys Ser  Arg Ala Arg Val Pro  Pro Gly Gly Ala Arg  Pro Pro Ala
    1970                1975                1980

Arg Gly  Ala Leu Ala Ala Arg  Arg Ser Phe Ser Ala  Ala Xaa Arg
    1985                1990                1995
```

```
Arg Pro  Trp Ala Phe Trp Arg  Gly Ser Val Ala Arg  Val Pro Asp
    2000                 2005                 2010

Gly Pro  Arg Ala Arg Cys Ala  Leu Gly His Leu Asp  Pro Ala Asp
    2015                 2020                 2025

Leu Leu  Val Ser Arg Val Gly  Ala Thr Ala Gly Val  Gly His Gln
    2030                 2035                 2040

Ala Met  Gly Val Gln Arg Gly  Gln Gly Pro Val Leu  Pro Gly Ser
    2045                 2050                 2055

Gln Gly  Pro Arg Gln Arg Gly  Leu Arg His Gly Glu  Gly Val Arg
    2060                 2065                 2070

Ala Gly  Leu Gly Ala Cys Glu  Gly Ala Leu Gln Ala  His Pro Ala
    2075                 2080                 2085

Gly Arg  Glu Pro Leu Pro Val  Gly Ala Leu Arg Val  Gly Gln Val
    2090                 2095                 2100

Ala Ile  Glu His Glu Phe Val  Val Glu Arg Leu Gly  Arg Val Ala
    2105                 2110                 2115

Leu Gly  Ala Glu Leu Thr Phe  Gly Ser Val Ser Ala  Asp Gly Thr
    2120                 2125                 2130

Glu Glu  Gly Leu Glu Gly Val  Glu Leu Gly Gly Glu  Glu Asp Gly
    2135                 2140                 2145

Leu Gly  Gly Val Gly Val Arg  Ala Ala Ala Gly Ala  Asp Gly Leu
    2150                 2155                 2160

Ala Leu  His Glu Pro Gly Glu  Val Gly Pro Val Gly  Val Lys Asn
    2165                 2170                 2175

Glu Val  Ser Ser Val Leu Phe  Asp Ala Phe Leu Thr  Ser Gly Leu
    2180                 2185                 2190
```

```
His Glu  Leu Val Ser Pro Leu  Gly Asp Lys Glu Ala  Val Arg Val
    2195                2200                2205


Pro Val  Asp Arg Leu Tyr Gly  Pro Val Leu Glu Arg  Gly Ala Ala
    2210                2215                2220


Val Leu  Val Val Glu Glu Pro  Arg Pro Leu Arg Asp  Glu Gly Pro
    2225                2230                2235


Gly Pro  Gly Gln His Glu Gly  Gly His Val Gly Gly  Val Ala Val
    2240                2245                2250


Val Val  His Gln Arg Val His  Leu Leu Gln Gly Met  Gln Ala His
    2255                2260                2265


Val Pro  Leu Val His Ile Gln  Glu Gly Asp Trp Leu  Val Ser Val
    2270                2275                2280


Gly His  Val Thr Gly Gly Pro  Gly Arg Gly Gly Ile  Lys Gly Gly
    2285                2290                2295


Gly Pro  Leu Leu Val Leu Thr  Val Phe Arg Ile Ala  Val Gln Glu
    2300                2305                2310


Arg Gln  Leu Leu Gly Val Phe  Pro Leu Glu Gly Trp  His Asn Leu
    2315                2320                2325


Gly Thr  Gln Val Val Ser Phe  Lys Arg Gly Gly Phe  Asp Ile Asp
    2330                2335                2340


Gly Ala  Val Gly Asp Ala Phe  His Glu Pro Leu Val  His Leu Val
    2345                2350                2355


Arg Lys  Asp Asp Leu Phe Val  Val Glu Leu Gly Gly  Glu Gly Ala
    2360                2365                2370


Val Glu  Gly Val Gly Glu Glu  Leu Gly Asp Gly Ala  His Gly Leu
    2375                2380                2385
```

```
Val Leu  Phe Leu Val Gly Ala  Leu Leu Gly Gly Asp  Val Glu Leu
    2390                2395                2400


His Val  Leu Ala Arg His Ala  Leu Pro Phe Gly Glu  Asp Gly Gly
    2405                2410                2415


Glu Leu  Val Gly His Asp Ser  Asp Pro Pro Ala Ala  Val Val Gln
    2420                2425                2430


Gly Asp  Glu Val His Ala Gly  Gly His Leu Ala Ala  Gln Gly Leu
    2435                2440                2445


Val Gly  Pro Ala Glu Ala Pro  Ala Leu Ala Arg Ala  Glu Gly Gly
    2450                2455                2460


Gln Arg  Val Gln His Glu Leu  Val Gly Gly Val Gly  Val His Gly
    2465                2470                2475


Glu Asp  Ala Gly Gln Lys Leu  Gly Val Glu Val Ala  Asp Ala Gly
    2480                2485                2490


Val Gln  Ile Val Gln Arg Arg  Leu Pro Val Ala His  Gly Gln Arg
    2495                2500                2505


Ala Leu  Val Gly Ala Glu Gly  Arg Ala Pro Gly His  Gly Val Arg
    2510                2515                2520


Glu Arg  Gly Gly Val His Ala  Ala Asp Val Val Asp  Val Glu Gly
    2525                2530                2535


Leu Leu  Glu Asp Ala Asp Val  Gly Gly Val Ala Ala  Pro Pro Ala
    2540                2545                2550


Asp Ala  Gly Ala His Val Val  Val Gln Leu Val Arg  Gly Arg Glu
    2555                2560                2565


Glu Pro  Arg Ala Glu Val Gly  Ala Leu Arg Leu Phe  Gly Ala Val
    2570                2575                2580
```

```
Asp Asp  Leu Ala Glu Asp Gly  Val Gly Val Gly Gly  Asp Gly Gly
    2585                2590                2595


Pro Leu  Glu Asp Val Glu Val  Gly Val Gly Gln Ala  Asp Arg Val
    2600                2605                2610


Pro Asp  Glu Val Gly Val Gly  Val Leu Gln Leu Gly  Asp Glu Leu
    2615                2620                2625


Gly Gly  Asp Glu Asp Val Gln  Gly Ala Val Val Glu  Gly Leu Leu
    2630                2635                2640


Asp Asp  Val Val Leu Glu Leu  Ala Leu Leu Leu Pro  Gln Leu Ala
    2645                2650                2655


Val Glu  Lys Glu Leu Phe Ala  Val Leu Pro Val Leu  Phe Glu Gly
    2660                2665                2670


Glu Pro  Val Leu Ile Gly Thr  Val Arg Ala His His  Val Glu Leu
    2675                2680                2685


Val Asp  Gly Leu Val Gly Ala  Ala Ala Leu Leu His  Gly Glu Gly
    2690                2695                2700


Val Ser  Leu Cys Gly Leu Ala  Gln Gly Gly Val Gly  Glu Gly Glu
    2705                2710                2715


Gly Val  Ala His His Asp Leu  Glu Glu Leu Val Leu  Glu Val Glu
    2720                2725                2730


Val Val  Ala Ala Ala Leu Leu  Pro Glu Leu Glu Val  Arg Ala Leu
    2735                2740                2745


Leu Val  Gly Gly Val Gly Gln  Ser Glu Ser Asn Ile  Val Glu Glu
    2750                2755                2760


Asp Leu  Ala Arg Ala Gly His  Glu Val Ala Ser Asp  Ala Glu Arg
    2765                2770                2775
```

```
Leu Gly  His Leu Gly Pro Val  Val Asp Asp Leu Gly  Gly Glu Asp
    2780                2785                2790


Asp Leu  Val Glu Ala Val Asp  Val Val Pro Asp Asp  Val Glu Phe
    2795                2800                2805


His Glu  Ser Arg Ala Ala Leu  Asn Val Gly Gln Leu  Leu Glu Leu
    2810                2815                2820


Val Val  Gly Glu Leu Gly Gly  Val Ala Glu Pro Val  Leu Leu Glu
    2825                2830                2835


Gly Pro  Val Gly Asp Val Gly  Val Gly Ala Glu Glu  Gly Ser Pro
    2840                2845                2850


Glu Ile  His Gly Gln Gly Gly  Leu Gln Ala Val Pro  Val Leu Thr
    2855                2860                2865


Glu Leu  Leu Ala His Gly His  Phe Phe Gly Gly Asp  Ala Val Glu
    2870                2875                2880


Gly Ala  Gly Val Ala Val Pro  Ala Val Pro Leu Glu  Leu Glu Gly
    2885                2890                2895


Glu Val  Val Gly Glu Leu Asp  Glu Arg Arg Val Pro  Gly Glu Phe
    2900                2905                2910


His Asp  Gln His Glu Gly Asp  Glu Leu Leu Ala Glu  Gly Pro His
    2915                2920                2925


Pro Gly  Val Gly Phe His Ile  Val Gly Glu Glu Glu  Pro Phe Gly
    2930                2935                2940


Ala Arg  Met Arg Ala Asp Gly  Glu Glu Leu Asp Leu  Leu Pro Pro
    2945                2950                2955


Val Gly  Gly Met Ala Val Asp  Val Met Glu Val Glu  Met Pro Thr
    2960                2965                2970
```

```
Ala Arg  Arg Ala Leu Val Leu  Val Phe Ile Gln Ala  Ser Ala Val
    2975                2980                2985


Leu Ala  Thr Leu His Gly Met  His Val Leu His Glu  Leu Tyr Leu
    2990                2995                3000


Gly Ser  Phe Asp Glu Glu Phe  Gln Trp Ala Val Glu  Arg Trp Arg
    3005                3010                3015


Leu His  Leu Val Leu Tyr Tyr  Val Leu Ala Ile Gly  Val Ala Ile
    3020                3025                3030


Val Cys  Leu Asp Gly Gly His  Ala Asp Glu Pro Ala  Arg Glu Ala
    3035                3040                3045


Gly Pro  Asp Phe Gly Ser Asp  Gly Ser Glu Ser Glu  Asp Glu Gly
    3050                3055                3060


Ala Gln  Ala Gly Ala Val Gln  Gly Pro Glu Thr Leu  Arg Ser Gln
    3065                3070                3075


Val Ser  Gly Gln Arg Arg Arg  Ala Val Asp Leu Gln  Glu Leu Phe
    3080                3085                3090


Gln Gly  Ala Arg Glu Val Gln  Met Val Leu Asp Leu  His Gly Ala
    3095                3100                3105


Val Gly  Gly Asp Val His Gly  Leu Gln Gly Pro Val  Pro Leu Gly
    3110                3115                3120


Arg His  His Arg Ala Pro Phe  Leu Leu Gly Arg Cys  Phe His Ala
    3125                3130                3135


Gly Gln  Lys Arg Arg Arg Gly  Arg Ala Pro Gly Gly  Arg Gly Gly
    3140                3145                3150


Ser Gly  Pro Gly Gly Arg Gly  Gly Arg Gly Thr Ser  Ala Pro Arg
    3155                3160                3165
```

```
Ala Gly  Arg Phe Trp Tyr Cys  Ala Arg Arg Arg Leu  Ala Ala Thr
    3170                 3175                 3180


Thr Arg  Arg Leu Thr Ser Trp  Ile Arg Leu Trp Val  Lys Ala Thr
    3185                 3190                 3195


Gly Pro  Val Ser Leu Asn Leu  Lys Glu Ser Ser Thr  Glu Ser Ile
    3200                 3205                 3210


Ser Val  Ser Leu Thr Ala Ala  Cys Arg Arg Ile Ser  Cys Thr Ser
    3215                 3220                 3225


Pro Glu  Leu Ser Trp Ala Ile  Ser Val Met Asn Cys  Ser Ile Ser
    3230                 3235                 3240


Ser Ser  Arg Ser Pro Arg Pro  Ala Arg Ser Thr Val  Ala Ala Arg
    3245                 3250                 3255


Ser Leu  Glu Met Arg Pro Met  Ser Cys Glu Lys Ala  Phe Met Pro
    3260                 3265                 3270


Ala Ser  Phe Gln Thr Arg Leu  Thr Thr Ala Pro Ser  Gly Ser Arg
    3275                 3280                 3285


Ala Arg  Met Thr Thr Trp Ala  Arg Leu Ser Ser Thr  Trp Arg Val
    3290                 3295                 3300


Lys Thr  Ala Leu Gln Arg Arg  Trp Arg Leu Ser Val  Val Ala Met
    3305                 3310                 3315


Cys Ser  Val Thr Lys Lys Tyr  Met Ile Gln Arg Arg  Ser Gly Ile
    3320                 3325                 3330


Ser Leu  Thr Ser Pro Arg Ala  Ser Lys Arg Ser Met  Ala Ser Lys
    3335                 3340                 3345


Ser Thr  Ala Lys Leu Lys Asn  Trp Glu Leu Arg Ala  Glu Thr Val
    3350                 3355                 3360
```

```
Asn Ser  Ser Ser Arg Arg Arg  Met Ser Ser Ala Met  Val Ala Arg
    3365                 3370                 3375

Thr Ser  Arg Ser Lys Ala Pro  Gly Gly Ser Ser Ser  Ser Ile Ser
    3380                 3385                 3390

Ser Ser  Ser Thr Asn Ile Ser  Ser Thr Ser Ser Ser  Gly Gly Gly
    3395                 3400                 3405

Gly Gly  Gly Gly Ala Leu Arg  Arg Arg Arg Arg Thr  Gly Arg Arg
    3410                 3415                 3420

Ser Met  Lys Arg Ser Met Val  Ser Pro Arg Arg Arg  Arg Met Val
    3425                 3430                 3435

Ser Val  Thr Ala Arg Pro Ser  Ser Arg Gly Arg Ser  Val Lys Thr
    3440                 3445                 3450

Pro Pro  Arg Ile Ser Arg Trp  Pro Pro Gly Gly Ser  Pro Leu Gly
    3455                 3460                 3465

Arg Glu  Arg Ala Leu Thr Met  His Leu Ile Asn Trp  Pro Val Gly
    3470                 3475                 3480

Thr Pro  Arg Lys Asp Leu Ser  Val Ser Arg Ser Thr  Gly Ser Glu
    3485                 3490                 3495

Asn Arg  Thr Lys Ala Ser Ser  Gln Ser Gln Ser Gln  Gly Arg Leu
    3500                 3505                 3510

Ser Pro  Val Ser Cys Ser Ser  Gly Ile Ser Gly Gly  Gly Arg Ala
    3515                 3520                 3525

Met Leu  Leu Val Met Lys Leu  Lys Ala Val Leu Arg  Arg Arg Met
    3530                 3535                 3540

Val Ala  Arg Ser Thr Arg Ser  Leu Gly Pro Ala Cys  Trp Met Arg
    3545                 3550                 3555
```

```
Arg Arg  Ser Ala Met Pro Gln  Ala Trp Ser His Leu  Ala Arg Ser
    3560                3565                3570

Leu Ser  Cys Met Ser Arg Ser  Thr Gly Thr Ser Ser  Ser Pro Ala
    3575                3580                3585

Arg Pro  Cys Met Arg Val Ser  Pro Asn Pro Arg Trp  Gly Trp Thr
    3590                3595                3600

Ser Ala  Arg Ser Ala Thr Thr  Arg Ser Ala Arg Met  Ala Cys Cys
    3605                3610                3615

Ile Trp  Val Arg Val Val Trp  Lys Ser Ser Lys Ser  Thr Lys Arg
    3620                3625                3630

Trp Ala  Pro Val Leu Met Val  Glu Gln Leu Ala Met  Thr Asp Gln
    3635                3640                3645

Leu Thr  Val Trp Trp Pro Gly  Arg Thr Ser Ser Trp  Tyr Leu Arg
    3650                3655                3660

Arg Glu  Ala Arg Val Ser Lys  Met Ser Leu Gln Val  Arg Thr Arg
    3665                3670                3675

Tyr Trp  Tyr Pro Thr Arg Lys  Cys Gly Gly Gly Trp  Arg Ser Gly
    3680                3685                3690

His Arg  Ser Val Ala Gly Ala  Pro Gly Ala Arg Ser  Ser Ser Met
    3695                3700                3705

Arg Arg  Trp Pro Met Tyr Leu  Asp Ile Gln Val Met  Pro Ala Ala
    3710                3715                3720

Val Val  Glu Ala Arg Gly Asn  Ser Arg Thr Arg Phe  Gln Met Leu
    3725                3730                3735

Arg Ser  Gly Arg Lys Phe Met  Val Ala Ala Val Trp  Pro Val Arg
    3740                3745                3750
```

```
Arg Ala  Gln Ser Trp Met Leu  Thr Tyr Gly Gln Lys  Arg Lys Arg
    3755                 3760                 3765


Ser Ala  Ala Arg Leu Arg Gly  Leu Glu Ala Lys Arg  Thr Gly Trp
    3770                 3775                 3780


Ala Ala  Arg Val Pro Arg Phe  Glu Ser Arg Ile Arg  Leu Glu Pro
    3785                 3790                 3795


Gln Leu  Thr Trp Tyr Trp His  Ser Arg Leu Asp Pro  Ser Leu Leu
    3800                 3805                 3810


Thr Lys  Pro Pro Gly Tyr Gly  Gly Gly Ser Phe Phe  Gly Leu Gly
    3815                 3820                 3825


Arg Trp  Ser Lys Thr Ser Lys  Arg Gly Lys Arg Pro  Pro Ala Met
    3830                 3835                 3840


Ala Arg  Cys Arg Ser Leu Glu  Lys Glu Ser Pro Gly  Leu Arg Cys
    3845                 3850                 3855


Gly Val  Pro Arg Phe Glu Pro  Gln Arg Ser Ala Pro  Ala Gly Phe
    3860                 3865                 3870


Arg Gly  Arg Gly Arg Gly Cys  Pro Val Val Ser Lys  Thr Pro Pro
    3875                 3880                 3885


Ala Asp  Phe Ser Ser Tyr Gly  Ala Ser Pro Ser Phe  Ser Cys Val
    3890                 3895                 3900


Phe Ala  Arg Cys Ile Pro Tyr  Cys Gly Arg Cys Ala  Pro Thr Leu
    3905                 3910                 3915


His Leu  Asn Arg Pro Tyr Arg  Arg Ser Ser Ser Asn  Ser Arg Arg
    3920                 3925                 3930


Phe Cys  Pro Arg Pro Ser Ser  Ser Gln Pro Leu Pro  Arg Arg Pro
    3935                 3940                 3945
```

```
Pro Ala  Glu Pro Ala Phe Ser  Met Thr Trp Pro Trp  Lys Arg Ala
    3950                3955                3960

Arg Gly  Trp Arg Gly Trp Gly  Arg Arg Arg Arg Ser  Gly Thr Arg
    3965                3970                3975

Ala Cys  Arg Lys Gly Thr Leu  Ala Arg Pro Thr Cys  Pro Ser Arg
    3980                3985                3990

Thr Cys  Ser Glu Thr Gly Ala  Ala Arg Ser Pro Arg  Arg Cys Ala
    3995                4000                4005

Pro Pro  Ala Ser Thr Arg Gly  Gly Ser Cys Gly Ala  Ala Trp Thr
    4010                4015                4020

Glu Ser  Gly Cys Gly Thr Arg  Ile Ser Arg Arg Thr  Ser Arg Gly
    4025                4030                4035

Ser Ala  Pro Arg Ala Arg Thr  Trp Pro Arg Pro Thr  Trp Ser Arg
    4040                4045                4050

Arg Thr  Ser Arg Pro Arg Arg  Arg Ala Thr Ser Lys  Asn Pro Ser
    4055                4060                4065

Thr Thr  Thr Cys Ala Arg Ser  Arg Ala Arg Arg Pro  Trp Ala Cys
    4070                4075                4080

Thr Cys  Gly Thr Cys Trp Arg  Pro Ser Cys Arg Thr  Pro Arg Ala
    4085                4090                4095

Ser Arg  Arg Arg Ser Cys Phe  Trp Trp Cys Ser Thr  Val Gly Thr
    4100                4105                4110

Thr Arg  Arg Ser Gly Arg Arg  Cys Ile Ser Pro Ser  Pro Arg Ala
    4115                4120                4125

Ala Gly  Ser Trp Thr Trp Thr  Phe Cys Arg Ala Ser  Trp Cys Arg
    4130                4135                4140
```

```
Ser Ala  Gly Cys Arg Cys Pro  Arg Ser Trp Arg Leu  Ser Thr Ser
    4145                4150                4155

Arg Cys  Ala Trp Ala Ser Thr  Thr Leu Gly Arg Ser  Thr Arg Pro
    4160                4165                4170

Arg Thr  Cys Pro Thr Arg Arg  Arg Ser Thr Gly Phe  Thr Cys Ala
    4175                4180                4185

Pro Lys  Cys Pro Ala Thr Ile  Trp Gly Cys Thr Ala  Thr Thr Gly
    4190                4195                4200

Cys Thr  Ala Arg Ala Pro Ala  Ala Gly Ala Ser Ala  Thr Arg Ser
    4205                4210                4215

Cys Thr  Ala Cys Ser Gly Pro  Pro Gly Pro Gly Pro  Arg Gly Arg
    4220                4225                4230

Ala Thr  Leu Thr Trp Ala Arg  Thr Cys Ala Gly Ser  Pro Ala Ala
    4235                4240                4245

Gly Pro  Trp Lys Leu Pro Ala  Val Pro Pro Thr Trp  Arg Arg Trp
    4250                4255                4260

Thr Met  Arg Arg Arg Arg Ala  Ser Thr Trp Lys Thr  Asp Gly Ala
    4265                4270                4275

Thr Val  Phe Leu Leu Asp Ala  Ala Thr Ala Thr Ala  Ser Ser Arg
    4280                4285                4290

Asp Ala  Gly Gly Ala Ala Glu  Pro Ala Val Arg His  Leu Leu Gly
    4295                4300                4305

Arg Leu  Asp Pro Gly His Ala  Thr His His Gly Ala  Asp Asp Pro
    4310                4315                4320

Gln Ser  Arg Ser Leu Thr Ala  Ala Ser Gly Gln Pro  Ala Leu Gly
    4325                4330                4335
```

```
His Pro  Gly Gly Arg Gly Ala  Leu Ala Leu Glu Pro  His Ala Arg
    4340                4345                4350


Glu Gly  Ala Gly His Arg Glu  Arg Ala Gly Gly Glu  Gln Gly His
    4355                4360                4365


Pro Arg  Arg Arg Gly Arg Ala  Gly Val Gln Arg Ala  Ala Gly Ala
    4370                4375                4380


Arg Gly  Pro Leu Gln Gln His  Gln Arg Ala Asp Glu  Pro Gly Pro
    4385                4390                4395


His Gly  Asp Arg Arg Ala Arg  Gly Gly Val Ala Ala  Arg Ala Val
    4400                4405                4410


Pro Pro  Arg Val Glu Pro Gly  Leu His Gly Gly Ala  Glu Arg Leu
    4415                4420                4425


Pro Glu  His Ala Ala Arg Gln  Arg Ala Pro Gly Pro  Gly Gly Leu
    4430                4435                4440


His Gln  Leu His Gln Arg Ala  Ala Ala Asp Gly Gly  Arg Gly Ala
    4445                4450                4455


Pro Glu  Arg Gly Val Pro Val  Gly Ala Gly Leu Leu  Leu Pro Asp
    4460                4465                4470


Gln Ser  Pro Gly Leu Ala Asp  Arg Glu Pro Glu Pro  Gly Phe Gln
    4475                4480                4485


Glu Leu  Ala Gly Thr Val Gly  Arg Ala Gly Pro Gly  Arg Gly Pro
    4490                4495                4500


Arg Asp  Gly Val Glu Pro Ala  Asp Ala Glu Leu Ala  Pro Ala Ala
    4505                4510                4515


Ala Ala  Gly Gly Ala Leu His  Gly Gln Arg Gln Arg  Glu Pro Arg
    4520                4525                4530
```

```
Leu Val  Pro Gly Leu Pro Ala  Pro Val Pro Arg Gly  His Arg Ala
    4535                4540                4545


Gly Ala  Arg Gly Arg Ala Asp  Leu Pro Gly Asp His  Pro Arg Glu
    4550                4555                4560


Pro Arg  Ala Gly Pro Gly Gly  Pro Gly Gln Pro Gly  Gly His Pro
    4565                4570                4575


Glu Leu  Pro Ala Asp Gln Pro  Val Ala Glu Asp Pro  Ala Pro Val
    4580                4585                4590


Arg Ala  Glu His Arg Gly Gly  Ala His Pro Ala Leu  Arg Ala Ala
    4595                4600                4605


Glu Arg  Gly Ala Val Pro Asp  Ala Gly Gly Gly His  Ala Gln Arg
    4610                4615                4620


Arg Ala  Arg His Asp Arg Ala  Gln His Gly Ala Gln  His Val Arg
    4625                4630                4635


Ser Gln  Pro Pro Val His Gln  Ala Asp Gly Leu Leu  Ala Ser Gly
    4640                4645                4650


Gly Arg  His Glu Leu Gly Leu  Leu Tyr Gln Arg His  Leu Glu Pro
    4655                4660                4665


Ala Leu  Ala Pro Ala Ala Arg  Val Leu His Gly Arg  Val Arg His
    4670                4675                4680


Ala Arg  Pro Gln Arg Arg Val  Pro Val Gly Arg Arg  Gly Gln Gln
    4685                4690                4695


Arg Val  Leu Ala Ala Pro Arg  His His Arg Val Glu  Glu Arg Gly
    4700                4705                4710


Arg Gly  Pro Ala Ala Val Leu  Gly Ala Val Arg Ser  Arg Gly Cys
    4715                4720                4725
```

```
Cys Arg  Gly Gly Ala Gly Arg  Gln Pro Leu Pro Glu  Pro Ala Leu
    4730                4735                4740


Phe Ala  Glu Gln Arg Ala Gln  Gln Arg Ala Gly Ser  Ala Asp Ala
    4745                4750                4755


Ala Ala  Pro Ala Gly Arg Gly  Gly Val Pro Glu Arg  Leu Leu Val
    4760                4765                4770


Glu Ala  Arg Ala Arg Glu Glu  Leu Pro Gln Arg Asp  Arg Glu Pro
    4775                4780                4785


Gly Gly  Gln Asp Glu Pro Leu  Glu Asp Val Arg Ala  Arg Ala Gln
    4790                4795                4800


Gly Arg  Ala Pro Ser Gln Gln  Arg Arg His Pro Thr  Pro Ala Thr
    4805                4810                4815


Arg Gln  Ala Ala Gly Ser Gly  Val Gly Arg Gly Phe  Arg Arg Arg
    4820                4825                4830


Gln Gln  Arg Val Gly Leu Gly  Trp Glu Trp Trp Trp  Pro Val Arg
    4835                4840                4845


Ser Leu  Ala Pro Pro Tyr Arg  Ala Pro Asp Val Arg  Ile Lys Asn
    4850                4855                4860


Lys Lys  Arg Tyr Ser Pro Arg  Pro Trp Arg Pro Ala  Cys Val Leu
    4865                4870                4875


Leu Cys  Cys Leu Tyr Asp Glu  Ala Arg Val Pro Gly  Gly Ser Ser
    4880                4885                4890


Ser Leu  Val Arg Glu Arg Asp  Ala Ala Gly Gly Gly  Gly Gly Asp
    4895                4900                4905


Ala Ala  Pro Ala Gly Gly Ala  Leu Arg Ala Pro Ala  Val Pro Gly
    4910                4915                4920
```

```
Ala Tyr  Gly Gly Ala Glu Gln  His Ser Leu Leu Gly  Ala Gly Thr
    4925                4930                4935


Leu Val  Arg Tyr His Pro Val  Val Pro Gly Gly Gln  Gln Val Gly
    4940                4945                4950


Gly His  Arg Leu Ala Glu Leu  Pro Glu Arg Pro Gln  Gln Leu Pro
    4955                4960                4965


Asp His  Arg Gly Ala Glu Gln  Arg Phe His Pro His  Gly Gly Gln
    4970                4975                4980


His Pro  Asp His Gln Leu Arg  Ala Leu Ala Val Gly  Arg Pro Ala
    4985                4990                4995


Glu Asn  His His Ala His Gln  His Ala Gln Arg Glu  Arg Val His
    5000                5005                5010


Val Gln  Gln Gln Val Gln Gly  Ala Gly Asp Gly Leu  Ala Gln Asp
    5015                5020                5025


Pro Gln  Trp Gly Arg Gly Gly  Glu Leu Trp Ser Gly  Arg Ala Asp
    5030                5035                5040


Leu Arg  Val Gly Gly Val Ala  Ala Arg Gly Gln Leu  Leu Gly Asp
    5045                5050                5055


His Asp  His Arg Ser Asp Glu  Gln Arg His His Arg  Gln Leu Leu
    5060                5065                5070


Gly Gly  Gly Ala Ser Glu Arg  Gly Ala Gly Glu Arg  His Arg Arg
    5075                5080                5085


Glu Val  Arg His Ala Gln Leu  Pro Ala Gly Leu Gly  Pro Arg Asp
    5090                5095                5100


Arg Ala  Gly Asp Ala Gly Arg  Val His Gln Arg Gly  Leu Pro Pro
    5105                5110                5115
```

```
Arg His  Arg Pro Ala Ala Arg  Leu Arg Arg Gly Leu  His Arg Glu
    5120                5125                5130


Pro Pro  Gln Gln Pro Ala Gly  His Pro Gln Ala Ala  Ala Leu Pro
    5135                5140                5145


Gly Gly  Leu Pro Asp Pro Val  Arg Gly Pro Gly Gly  Gly Gln His
    5150                5155                5160


Pro Arg  Ala Leu Gly Cys Arg  Ser Leu Glu Lys Gln  Gly Gly Gly
    5165                5170                5175


Arg Arg  Ser Gly Asp Arg Ser  Arg Gly His Arg Leu  Tyr Arg Gly
    5180                5185                5190


Ala Gly  Arg Phe Cys Arg Arg  Gly Ser Gly Arg Gly  Gly Asn Arg
    5195                5200                5205


Lys Asp  Ser His Pro Ala Gly  Gly Glu Gly Gln Gln  Gly Gln Glu
    5210                5215                5220


Leu Gln  Arg Ala Arg Gly Gln  Glu Lys His Arg Leu  Pro Gln Leu
    5225                5230                5235


Val Pro  Gly Leu Gln Leu Arg  Arg Pro Arg Glu Gly  Arg Ala Leu
    5240                5245                5250


Leu Asp  Ala Ala His His Leu  Gly Arg His Leu Arg  Arg Gly Ala
    5255                5260                5265


Ser Leu  Leu Val Ala Ala Arg  His Asp Ala Arg Pro  Gly His Leu
    5270                5275                5280


Pro Leu  His Ala Ser Ser Gln  Leu Pro Gly Gly Gly  Arg Arg Ala
    5285                5290                5295


Pro Ala  Arg Leu Leu Gln Glu  Leu Leu Gln Arg Ala  Gly Arg Leu
    5300                5305                5310
```

```
Leu Ala  Ala Ala Ala Arg Leu  His Leu Ala His Ala  Arg Leu Gln
    5315                5320                5325

Pro Leu  Pro Arg Glu Pro Asp  Pro Arg Pro Pro Ala  Arg Ala His
    5330                5335                5340

His Tyr  His Arg Gln Lys Arg  Ser Cys Ser His Arg  Ser Arg Asp
    5345                5350                5355

Pro Ala  Ala Ala Gln Gln Tyr  Pro Gly Ser Pro Ala  Arg Asp Arg
    5360                5365                5370

His Arg  Gln Thr Pro His Leu  Pro Leu Arg Leu Gln  Gly Pro Gly
    5375                5380                5385

Arg Ser  Arg Ala Ala Arg Pro  Leu Glu Pro His Leu  Leu Lys Asn
    5390                5395                5400

Val His  Ser His Leu Ala Gln  His Arg Leu Gly Pro  Ala Arg Ala
    5405                5410                5415

Gln Gln  Asp Val Arg Arg Arg  Ser Pro Thr Leu His  Ala Thr Pro
    5420                5425                5430

Arg Ala  Arg Ala Arg Ala Leu  Pro Arg Ser Leu Gly  Arg Pro Gln
    5435                5440                5445

Gly Pro  Arg Ala Leu Ala His  His Arg Arg Arg Arg  Asp Arg Pro
    5450                5455                5460

Gly Gly  Gly Arg Arg Ala Gln  Leu His Ala Arg Arg  Arg Ala Arg
    5465                5470                5475

Leu His  Arg Gly Arg Arg His  Arg Gln Arg Gly Gly  Arg Cys Ala
    5480                5485                5490

Pro Val  Arg Pro Arg Gln Glu  Pro Ala Ala Ala His  Arg Pro Ala
    5495                5500                5505
```

```
Ala Pro  Glu His Pro Arg His  Ala Arg Gly Ala Ser  Leu Ala Ala
    5510                5515                5520


Gln Gly  Gln Ala His Gly Thr  Gln Gly His Ala Gln  Gly Gly Gln
    5525                5530                5535


Thr Arg  Gly Leu Arg Gln Gln  Gln Arg Arg Gln Asp  Pro Gln Thr
    5540                5545                5550


Arg Gly  His Gly Gly Gly Gly  Gly His Arg Gln His  Val Pro Pro
    5555                5560                5565


Ala Ala  Arg Gln Arg Val Leu  Gly Ala Arg Arg Arg  His Arg Cys
    5570                5575                5580


Ala Arg  Ala Arg Ala His Pro  Pro Pro Ser His Leu  Lys Met Leu
    5585                5590                5595


Thr Ser  Arg Cys Cys Val Pro  Ala Ala Arg Arg Met  Ser Lys Arg
    5600                5605                5610


Lys Tyr  Lys Glu Glu Met Leu  Gln Val Ile Ala Pro  Glu Ile Tyr
    5615                5620                5625


Gly Pro  Ala Val Lys Glu Glu  Arg Lys Pro Arg Lys  Leu Lys Arg
    5630                5635                5640


Val Lys  Lys Asp Lys Lys Glu  Glu Glu Asp Val Asp  Gly Leu Val
    5645                5650                5655


Glu Phe  Val Arg Glu Phe Ala  Pro Arg Arg Arg Val  Gln Trp Arg
    5660                5665                5670


Gly Arg  Lys Val Lys Pro Val  Leu Arg Pro Gly Thr  Thr Val Val
    5675                5680                5685


Phe Thr  Pro Gly Glu Arg Ser  Gly Ser Ala Ser Lys  Arg Ser Tyr
    5690                5695                5700
```

```
Asp Glu  Val Tyr Gly Asp Glu  Asp Ile Leu Glu Gln  Ala Val Glu
    5705                5710                5715


Arg Leu  Gly Glu Phe Ala Tyr  Gly Lys Arg Ser Arg  Pro Ala Pro
    5720                5725                5730


Leu Lys  Glu Glu Ala Val Ser  Ile Pro Leu Asp His  Gly Asn Pro
    5735                5740                5745


Thr Pro  Ser Leu Lys Pro Val  Thr Leu Gln Gln Val  Leu Pro Ser
    5750                5755                5760


Ala Ala  Pro Arg Arg Gly Phe  Lys Arg Glu Gly Gly  Glu Asp Leu
    5765                5770                5775


Tyr Pro  Thr Met Gln Leu Met  Val Pro Lys Arg Gln  Lys Leu Glu
    5780                5785                5790


Asp Val  Leu Glu His Met Lys  Val Asp Pro Glu Val  Gln Pro Glu
    5795                5800                5805


Val Lys  Val Arg Pro Ile Lys  Gln Val Ala Pro Gly  Leu Gly Val
    5810                5815                5820


Gln Thr  Val Asp Ile Lys Ile  Pro Thr Glu Pro Met  Glu Thr Gln
    5825                5830                5835


Thr Glu  Pro Val Lys Pro Ser  Thr Ser Thr Met Glu  Val Gln Thr
    5840                5845                5850


Asp Pro  Trp Met Pro Ala Pro  Ala Ser Thr Thr Arg  Arg Arg Arg
    5855                5860                5865


Lys Tyr  Gly Ala Ala Ser Leu  Leu Met Pro Asn Tyr  Ala Leu His
    5870                5875                5880


Pro Ser  Ile Ile Pro Thr Pro  Gly Tyr Arg Gly Thr  Arg Phe Tyr
    5885                5890                5895
```

```
Arg Gly  Tyr Thr Ser Ser Arg  Arg Lys Thr Thr Thr  Arg Arg Arg
    5900                 5905                 5910

Arg Arg  Arg Thr Arg Arg Ser  Ser Thr Ala Thr Ser  Ala Ala Ala
    5915                 5920                 5925

Leu Val  Arg Arg Val Tyr Arg  Ser Gly Arg Glu Pro  Leu Thr Leu
    5930                 5935                 5940

Pro Arg  Ala Arg Tyr His Pro  Ser Ile Ala Ile Leu  Cys Arg Arg
    5945                 5950                 5955

Leu Leu  Leu Ala Asp Met Ala  Leu Thr Cys Arg Leu  Arg Val Pro
    5960                 5965                 5970

Ile Thr  Gly Tyr Arg Gly Arg  Lys Pro Arg Arg Arg  Arg Leu Thr
    5975                 5980                 5985

Gly Asn  Gly Leu Arg Arg His  His His Arg Arg Arg  Arg Ala Ile
    5990                 5995                 6000

Ser Lys  Arg Leu Gly Gly Gly  Phe Leu Pro Ala Leu  Ile Pro Ile
    6005                 6010                 6015

Ile Ala  Ala Ala Ile Gly Ala  Ile Pro Gly Ile Ala  Ser Val Ala
    6020                 6025                 6030

Val Gln  Ala Ser Gln Arg His  Asp Thr Ala Trp Lys  Ile Cys Asn
    6035                 6040                 6045

Lys Lys  Met Asp Arg Ser Trp  Ser Cys Asp Val Cys  Phe Met Glu
    6050                 6055                 6060

Asp Ile  Asn Phe Ser Ser Leu  Ala Pro Arg His Gly  Thr Arg Pro
    6065                 6070                 6075

Phe Met  Gly Thr Trp Ser Asp  Ile Gly Asn Ser Gln  Leu Asn Gly
    6080                 6085                 6090
```

```
Gly Ala  Phe Asn Trp Ser Ser  Leu Trp Ser Gly Leu  Lys Asn Phe
    6095                 6100                 6105

Gly Ser  Thr Leu Lys Thr Tyr  Gly Asn Lys Ala Trp  Asn Ser Ser
    6110                 6115                 6120

Thr Gly  Gln Ala Leu Arg Glu  Lys Leu Lys Glu Gln  Asn Phe Gln
    6125                 6130                 6135

Gln Lys  Val Val Asp Gly Leu  Ala Ser Gly Ile Asn  Gly Val Val
    6140                 6145                 6150

Asp Leu  Ala Asn Gln Ala Val  Gln Lys Gln Ile Asn  Ser Arg Leu
    6155                 6160                 6165

Asp Ala  Val Pro Pro Ala Gly  Ser Val Glu Met Pro  Gln Val Glu
    6170                 6175                 6180

Glu Glu  Leu Pro Pro Leu Asp  Lys Arg Gly Asp Lys  Arg Pro Arg
    6185                 6190                 6195

Pro Asp  Ala Glu Glu Thr Leu  Leu Thr His Thr Asp  Glu Pro Pro
    6200                 6205                 6210

Pro Tyr  Glu Glu Ala Val Lys  Leu Gly Leu Pro Thr  Thr Arg Pro
    6215                 6220                 6225

Val Ala  Pro Leu Ala Thr Gly  Val Leu Lys Pro Ser  Ser Ser Ser
    6230                 6235                 6240

Gln Pro  Ala Thr Leu Asp Leu  Pro Pro Pro Ala Ser  Arg Pro Ser
    6245                 6250                 6255

Thr Val  Ala Lys Pro Leu Pro  Pro Val Ala Val Ala  Ser Arg Ala
    6260                 6265                 6270

Pro Arg  Gly Arg Pro Gln Ala  Asn Trp Gln Ser Thr  Leu Asn Ser
    6275                 6280                 6285
```

```
Ile Val  Gly Leu Gly Val Gln  Ser Val Lys Arg Arg  Arg Cys Tyr
    6290                 6295                 6300


Lys Thr  Leu Arg Leu Thr Cys  Leu Ser Val Cys Ile  Cys Met Ser
    6305                 6310                 6315


Ala Asp  Gln Lys Glu Glu Glu  Ala Arg Arg Arg Val  Ala Arg Trp
    6320                 6325                 6330


Pro Pro  His Arg Cys Cys Pro  Ser Gly Arg Thr Cys  Thr Ser Pro
    6335                 6340                 6345


Asp Arg  Thr Leu Arg Ser Thr  Val Arg Val Trp Cys  Ser Ser Pro
    6350                 6355                 6360


Ala Pro  Gln Thr Pro Thr Ser  Val Trp Gly Thr Ser  Leu Gly Thr
    6365                 6370                 6375


Pro Arg  Trp Arg Pro Arg Thr  Met Pro Pro Thr Ala  Ala Ser Gly
    6380                 6385                 6390


Arg Cys  Ala Ser Cys Pro Trp  Thr Ala Arg Thr Thr  Pro Thr Arg
    6395                 6400                 6405


Thr Lys  Cys Ala Thr Arg Trp  Pro Trp Ala Thr Thr  Ala Cys Trp
    6410                 6415                 6420


Thr Trp  Pro Ala Pro Thr Leu  Thr Ser Ala Ala Cys  Trp Ile Gly
    6425                 6430                 6435


Gly Pro  Ala Ser Asn Pro Thr  Pro Ala Pro Pro Thr  Thr Ala Trp
    6440                 6445                 6450


Leu Pro  Arg Glu Arg Pro Thr  Leu Ala Ser Gly His  Ile Lys Leu
    6455                 6460                 6465


Val Ile  Leu Ile Gln Lys Lys  Pro Ile His Met Glu  Met His Leu
    6470                 6475                 6480
```

```
Cys Lys  Ala Leu Ala Leu Gln  Arg Met Val Phe Asn  Leu Glu Leu
    6485                6490                6495

Thr Ala  Met Val Arg Gln Ser  Met Gln Thr Lys Leu  Ile Asn Gln
    6500                6505                6510

Ser Leu  Lys Trp Val Met Leu  Asn Gly Met Thr Ser  Leu Val Leu
    6515                6520                6525

Met Lys  Asn Met Glu Ala Glu  Leu Leu Ser Leu Thr  Pro Lys Ser
    6530                6535                6540

Leu Ala  Met Val Leu Leu Pro  Ser Leu Pro Ile Lys  Lys Glu Ala
    6545                6550                6555

Arg Gln  Met Lys Pro Lys Gln  Ala Val Pro Lys Asn  Met Thr Leu
    6560                6565                6570

Thr Trp  His Ser Ser Ile Ile  Glu Val Gln Leu Pro  Pro Ala Pro
    6575                6580                6585

Gln Lys  Leu Phe Cys Ile Leu  Arg Met Trp Ile Trp  Lys Leu Gln
    6590                6595                6600

Ile Pro  Ile Leu Tyr Thr Arg  Gln Val Gln Met Thr  Val Ala Leu
    6605                6610                6615

Leu Ser  Ile Trp Val Ser Ser  Pro Cys Pro Thr Asp  Pro Thr Thr
    6620                6625                6630

Leu Ala  Ser Glu Thr Thr Leu  Ser Val Cys Thr Thr  Thr Ala Leu
    6635                6640                6645

Ala Ile  Trp Val Tyr Trp Leu  Asp Arg Pro Pro Ser  Met Leu Trp
    6650                6655                6660

Trp Thr  Cys Arg Thr Glu Thr  Pro Asn Cys Pro Thr  Ser Ser Cys
    6665                6670                6675
```

```
Leu Thr  Leu Trp Val Thr Glu  Pro Gly Ile Ser Val  Cys Gly Ile
    6680                6685                6690


Arg Arg  Trp Thr Val Met Thr  Pro Met Cys Ala Leu  Leu Lys Ile
    6695                6700                6705


Thr Val  Trp Arg Met Asn Phe  Leu Thr Ile Ala Ser  Pro Trp Met
    6710                6715                6720


Leu Trp  Val Glu Leu Ile Leu  Thr Arg Glu Leu Arg  Pro Met Val
    6725                6730                6735


Ile Ile  Lys Pro Pro Gly Pro  Lys Met Ile Leu Leu  Met Met Leu
    6740                6745                6750


Met Asn  Trp Ala Arg Ala Ile  Leu Ser Pro Trp Arg  Ser Thr Ser
    6755                6760                6765


Arg Pro  Thr Cys Gly Gly Thr  Ser Ser Thr Arg Thr  Trp Arg Cys
    6770                6775                6780


Thr Cys  Pro Thr Pro Thr Ser  Thr Arg Arg Pro Thr  Ser Arg Cys
    6785                6790                6795


Pro Pro  Thr Pro Thr Pro Thr  Ile Thr Thr Ala Ala  Trp Trp Arg
    6800                6805                6810


Pro Arg  Trp Trp Thr Pro Thr  Ser Thr Ser Gly Arg  Ala Gly Arg
    6815                6820                6825


Trp Thr  Pro Trp Thr Thr Ser  Thr Pro Ser Thr Thr  Thr Ala Thr
    6830                6835                6840


Arg Ala  Cys Asp Thr Ala Pro  Cys Ser Trp Ala Thr  Gly Ala Thr
    6845                6850                6855


Cys Pro  Ser Thr Ser Arg Cys  Pro Lys Ser Phe Ser  Pro Ser Arg
    6860                6865                6870
```

```
Ala Ser  Cys Ser Cys Pro Gly  Pro Thr Pro Thr Ser  Gly Thr Ser
    6875                6880                6885

Ala Arg  Thr Ser Thr Ser Cys  Arg Ala Pro Ser Ala  Thr Thr Cys
    6890                6895                6900

Ala Arg  Thr Gly Pro Pro Ser  Pro Ser Pro Ala Ser  Thr Ser Thr
    6905                6910                6915

Pro Pro  Ser Ser Pro Trp Arg  Thr Thr Pro Pro Pro  Arg Ser Arg
    6920                6925                6930

Pro Cys  Cys Ala Thr Thr Pro  Thr Thr Ser Pro Ser  Thr Thr Thr
    6935                6940                6945

Ser Arg  Arg Pro Thr Cys Ser  Thr Pro Ser Arg Pro  Thr Pro Pro
    6950                6955                6960

Thr Cys  Pro Ser Pro Ser Pro  Arg Ala Thr Gly Pro  Pro Ser Ala
    6965                6970                6975

Ala Gly  Pro Ser Arg Ala Ser  Arg Pro Ala Arg Arg  Pro Arg Ser
    6980                6985                6990

Ala Pro  Gly Ser Thr Pro Thr  Ser Ser Thr Arg Ala  Pro Ser Pro
    6995                7000                7005

Thr Ser  Thr Ala Pro Ser Thr  Ser Thr Thr Pro Ser  Arg Arg Ser
    7010                7015                7020

Pro Ser  Pro Ser Thr Pro Pro  Ser Ala Gly Pro Ala  Thr Thr Ala
    7025                7030                7035

Ser Arg  Pro Thr Ser Ser Lys  Ser Ser Ala Pro Ser  Thr Glu Arg
    7040                7045                7050

Gly Thr  Thr Trp Pro Ser Ala  Thr Pro Arg Thr Gly  Ser Trp Ser
    7055                7060                7065
```

```
Arg Cys  Trp Pro Thr Thr Thr  Ser Ala Thr Arg Ala  Ser Thr Cys
    7070                 7075                 7080


Pro Arg  Ala Thr Arg Thr Ala  Cys Thr Pro Ser Ser  Ala Thr Ser
    7085                 7090                 7095


Ser Pro  Ala Ala Arg Ser Trp  Thr Arg Ser Thr Thr  Arg Thr Thr
    7100                 7105                 7110


Arg Pro  Ser Pro Trp Pro Thr  Ser Thr Thr Thr Arg  Ala Ser Ser
    7115                 7120                 7125


Ala Thr  Ser Arg Pro Pro Cys  Ala Arg Ala Ser Pro  Thr Pro Pro
    7130                 7135                 7140


Thr Thr  Pro Thr Arg Ser Ser  Ala Arg Ala Pro Ser  Pro Ala Ser
    7145                 7150                 7155


Pro Arg  Lys Ser Ser Ser Ala  Thr Gly Ser Cys Gly  Ala Ser Pro
    7160                 7165                 7170


Ser Pro  Ala Thr Ser Cys Pro  Trp Ala Arg Ser Pro  Thr Ser Ala
    7175                 7180                 7185


Arg Thr  Cys Ser Thr Pro Thr  Pro Pro Thr Arg Thr  Ile Ser Lys
    7190                 7195                 7200


Ser Thr  Pro Trp Met Ser Pro  Pro Phe Ser Met Leu  Ser Ser Lys
    7205                 7210                 7215


Ser Ser  Thr Ser Ser Glu Cys  Thr Ser Pro Thr Ala  Ala Ser Ser
    7220                 7225                 7230


Arg Pro  Ser Thr Cys Ala Arg  Pro Ser Arg Pro Ala  Thr Pro Pro
    7235                 7240                 7245


Pro Lys  Pro Leu Ala Ser Cys  Lys Met Thr Ala Cys  Ala Gly Ser
    7250                 7255                 7260
```

```
Gly Glu  Gln Glu Leu Arg Ala  Ile Leu Arg Asp Leu  Gly Cys Gly
    7265                 7270                 7275

Pro Cys  Phe Leu Gly Thr Phe  Asp Lys Arg Phe Pro  Gly Phe Met
    7280                 7285                 7290

Ala Pro  His Lys Leu Ala Cys  Ala Ile Val Asn Thr  Ala Gly Arg
    7295                 7300                 7305

Glu Thr  Gly Gly Glu His Trp  Leu Ala Phe Ala Trp  Asn Pro Arg
    7310                 7315                 7320

Ser His  Thr Cys Tyr Leu Phe  Asp Pro Phe Gly Phe  Ser Asp Glu
    7325                 7330                 7335

Arg Leu  Lys Gln Ile Tyr Gln  Phe Glu Tyr Glu Gly  Leu Leu Arg
    7340                 7345                 7350

Arg Ser  Ala Leu Ala Thr Glu  Asp Arg Cys Val Thr  Leu Glu Lys
    7355                 7360                 7365

Ser Thr  Gln Thr Val Gln Gly  Pro Arg Ser Ala Ala  Cys Gly Leu
    7370                 7375                 7380

Phe Cys  Cys Met Phe Leu His  Ala Phe Val His Trp  Pro Asp Arg
    7385                 7390                 7395

Pro Met  Asp Lys Asn Pro Thr  Met Asn Leu Leu Thr  Gly Val Pro
    7400                 7405                 7410

Asn Gly  Met Leu Gln Ser Pro  Gln Val Glu Pro Thr  Leu Arg Arg
    7415                 7420                 7425

Asn Gln  Glu Ala Leu Tyr Arg  Phe Leu Asn Ala His  Ser Ala Tyr
    7430                 7435                 7440

Phe Arg  Ser His Arg Ala Arg  Ile Glu Lys Ala Thr  Ala Phe Asp
    7445                 7450                 7455
```

```
Arg Met  Asn Gln Asp Met Ser  Gly Val Cys Met Met  Leu Tyr Ser
    7460                 7465                 7470

Ser Thr  Ala His Val Tyr Ala  Thr Phe Ser Glu Ala  Leu Thr Leu
    7475                 7480                 7485

Phe Arg  Asn Arg Arg Gly Ser  Ala Gly Ser Arg His  Gly Pro Arg
    7490                 7495                 7500

Ala Gly  Ile Arg Cys Gly Thr  Gly Thr Trp Ala Ala  Thr Thr Arg
    7505                 7510                 7515

Gly Ser  Ala Ala Ser Ala Arg  Gly Gly Arg Gly Thr  Ser Arg Ser
    7520                 7525                 7530

Thr Ala  Cys Ala Val Ala Gly  Arg Pro Ala Gly Arg  Ala Arg Arg
    7535                 7540                 7545

Ser Asn  Arg Ser Trp Asp Pro  Arg Ser Ala Arg Glu  Ser Tyr Gly
    7550                 7555                 7560

Thr Arg  Gly Cys Ser Thr Gly  Thr Pro Ser Gly Pro  Gly Ala Ser
    7565                 7570                 7575

Arg Ser  Pro Ala Pro Ser Arg  Arg Cys Pro Pro Arg  Pro Asp Pro
    7580                 7585                 7590

Arg Arg  Trp Pro Ser Arg Arg  Gly Ser Ser Cys Arg  Ser Ala Ala
    7595                 7600                 7605

Pro Cys  Trp Ala Arg Ser Arg  Ala Cys Gly Cys Asn  Arg Ser Ala
    7610                 7615                 7620

Gly Gly  Ser Ala Ser Ser Gly  Pro Ala Arg Ser Ser  Cys Pro Gly
    7625                 7630                 7635

Thr Trp  Pro Ser Lys Pro Pro  Ala Gly Gly Arg Pro  Ala Ala Pro
    7640                 7645                 7650
```

```
Cys Arg  Pro Arg Arg Arg Pro  Arg Arg Thr Cys Arg  Thr Gly Trp
    7655                 7660                 7665


Trp Arg  Ser Gln Arg Arg Ala  Arg Ser Ser Ala Arg  Arg Cys Trp
    7670                 7675                 7680


Pro Ala  Ala Pro Arg Cys Ala  Pro Ser Gly Ser Gly  Ser Trp Pro
    7685                 7690                 7695


Gly Arg  Gly Ser Pro Ser Ala  Arg Ala Ala Arg Ser  Arg Ser Pro
    7700                 7705                 7710


His Pro  Ser Arg Ser Cys Ala  Pro Ser Gly Ser Ser  Arg Ser Arg
    7715                 7720                 7725


Ala Gly  Thr Ala Ala Cys Pro  Arg Pro Arg Cys Thr  Arg Ala Ala
    7730                 7735                 7740


Thr Ala  Arg Ser Arg Cys Ser  Pro Ser Ser Cys Gly  Arg Ser Gly
    7745                 7750                 7755


Ser Ala  Ser Ala Arg Ser Pro  Ala Gly Ser Gly Pro  Ser Ser Trp
    7760                 7765                 7770


Ser Gly  Ser Cys Cys Trp Arg  Ser Ala Glu Cys Arg  Gly Ala Pro
    7775                 7780                 7785


Arg Ser  His Thr Gly Gly Arg  Tyr Gly Gly Thr Pro  Arg Pro Ala
    7790                 7795                 7800


Arg Ala  Ser Ala Gly Arg Arg  Thr Ser Gly Arg Ser  Pro Arg Gly
    7805                 7810                 7815


Thr Gly  Pro Ser Ala Ala Ser  Ser Leu Pro Cys Pro  Ser Pro Arg
    7820                 7825                 7830


Pro Lys  Arg Ser Ala Gly Ser  Gly Gly Ser Ser Pro  Leu Ser Ser
    7835                 7840                 7845
```

```
Ser Pro  Pro Pro Lys Ser Gly  Gly Arg Ser Arg Pro  Gly Ser Gln
    7850                 7855                 7860

Thr Leu  Ala Cys Arg Pro Ser  Arg Cys Ala Arg Gly  Glu Ser Ser
    7865                 7870                 7875

Pro Arg  Pro Pro Ala Pro Pro  Arg Pro Ala Phe Arg  Pro Arg Cys
    7880                 7885                 7890

Pro Gly  Cys Leu Ala Lys Ala  His Ala Trp Ser Cys  Gly Val Ser
    7895                 7900                 7905

Phe Trp  Ala Ala Glu Ala Ala  Ala Glu Thr Cys Trp  Ala Ser Ala
    7910                 7915                 7920

Ser Ser  Arg Ser Pro Arg Leu  Phe Leu Leu Leu Gly  Arg Arg Pro
    7925                 7930                 7935

Arg Pro  Arg Gly Gly Arg His  Ala Ser Ser Gly Ala  Glu Ala Glu
    7940                 7945                 7950

Ala Thr  Gly Ser Arg Gly Ser  Ala Gly Gly Trp Gln  Ser Pro Phe
    7955                 7960                 7965

Arg Val  Arg Gly Cys Ala Pro  Gly Gly Ala Ala Leu  Thr Asp Phe
    7970                 7975                 7980

Leu Arg  Gly Arg Pro Leu Cys  Ser Pro Arg Glu Gln  Ala Trp Arg
    7985                 7990                 7995

Leu Ser  His Arg Arg Gln His  Arg His Leu Pro Pro  Pro Pro Pro
    8000                 8005                 8010

Thr Arg  Thr Ser Ser Ser Arg  Met Lys Ala Pro Pro  Arg Arg Pro
    8015                 8020                 8025

Ala Pro  Pro Pro Thr Pro Gln  Pro Gln Thr Cys Lys  Arg Trp Arg
    8030                 8035                 8040
```

```
Asn Pro  Ser Arg Leu Thr Trp  Ala Thr Arg Pro Arg  Ser Thr Arg
    8045                 8050                 8055

Arg Ser  Trp Gln Arg Ala Phe  Gln Pro Arg Lys Arg  Thr Thr Lys
    8060                 8065                 8070

Ser Ser  Gln Ser Arg Lys Gln  Arg Ala Ser Arg Thr  Arg Leu Gly
    8075                 8080                 8085

Ser Ser  Met Ala Thr Thr Ala  Gly Gln Arg Thr Cys  Ser Ser Ser
    8090                 8095                 8100

Ile Trp  Pro Ala Asn Ala Ser  Ser Ser Arg Thr Arg  Cys Ser Thr
    8105                 8110                 8115

Ala Pro  Arg Cys Pro Ser Ala  Trp Arg Ser Ser Ala  Ala Pro Thr
    8120                 8125                 8130

Ser Ala  Thr Ser Ser Arg Arg  Ala Cys Pro Pro Ser  Ala Ser Pro
    8135                 8140                 8145

Thr Ala  Pro Ala Ser Pro Thr  Arg Ala Ser Thr Ser  Thr Arg Ser
    8150                 8155                 8160

Ser Arg  Cys Pro Arg Pro Trp  Pro Pro Thr Thr Ser  Phe Ser Arg
    8165                 8170                 8175

Thr Lys  Gly Ser Pro Ser Pro  Ala Ala Pro Thr Ala  Pro Ala Pro
    8180                 8185                 8190

Thr Pro  Cys Ser Thr Trp Ala  Pro Ala Pro Ala Tyr  Leu Ile Ser
    8195                 8200                 8205

Pro Pro  Trp Lys Arg Phe Pro  Arg Ser Ser Arg Val  Trp Ala Ala
    8210                 8215                 8220

Thr Arg  Leu Gly Pro Arg Thr  Leu Cys Lys Glu Ala  Glu Arg Ser
    8225                 8230                 8235
```

```
Met Ser  Thr Thr Ala Pro Trp  Trp Ser Trp Lys Ala  Thr Thr Arg
    8240                8245                8250

Ala Trp  Arg Ser Ser Ser Ala  Arg Ser Ser Pro Thr  Ser Pro Thr
    8255                8260                8265

Arg Arg  Ser Thr Cys Pro Pro  Arg Ser Ala Pro Ser  Trp Thr Arg
    8270                8275                8280

Cys Ser  Ser Ser Ala Pro Arg  Pro Ser Arg Arg Arg  Arg Cys Arg
    8285                8290                8295

Thr Pro  Arg Ala Arg Thr Arg  Ala Ser Pro Trp Ser  Ala Thr Ser
    8300                8305                8310

Ser Trp  Arg Ala Gly Trp Glu  Arg Val Ala Pro Pro  Arg Ala Trp
    8315                8320                8325

Lys Ser  Gly Ala Ser Ser Trp  Pro Trp Ser Trp Pro  Trp Ser Trp
    8330                8335                8340

Ser Val  Cys Ala Ala Ser Ser  Pro Thr Arg Arg Pro  Cys Ala Arg
    8345                8350                8355

Ser Arg  Arg Thr Cys Thr Thr  Ser Ser Asp Thr Gly  Ser Cys Ala
    8360                8365                8370

Arg Pro  Ala Arg Ser Pro Thr  Trp Ser Pro Thr Trp  Ser Pro Thr
    8375                8380                8385

Trp Ala  Ser Cys Thr Arg Thr  Ala Trp Gly Arg Thr  Cys Cys Thr
    8390                8395                8400

Pro Pro  Cys Ala Gly Arg Pro  Ala Ala Thr Thr Ser  Ala Thr Ala
    8405                8410                8415

Ser Thr  Cys Thr Ser Ala Thr  Pro Gly Arg Arg Ala  Trp Ala Cys
    8420                8425                8430
```

```
Gly Ser  Ser Ala Trp Arg Ser  Arg Thr Lys Ser Ser  Ala Ser Ser
    8435                 8440                 8445


Cys Arg  Arg Thr Ser Arg Pro  Cys Gly Pro Gly Ser  Thr Ser Ala
    8450                 8455                 8460


Pro Pro  Pro Arg Thr Trp Pro  Thr Ser Ser Ser Pro  Ser Ala Cys
    8465                 8470                 8475


Gly Arg  Cys Ala Thr Gly Cys  Pro Thr Leu Ala Lys  Ala Cys Cys
    8480                 8485                 8490


Lys Thr  Phe Ala Leu Ser Ser  Ser Asn Ala Pro Gly  Ser Cys Pro
    8495                 8500                 8505


Pro Pro  Ala Pro Arg Cys Pro  Arg Thr Ser Cys Arg  Pro Ser Ala
    8510                 8515                 8520


Ser Ala  Pro Arg Arg Ser Gly  Ala Thr Ala Thr Cys  Cys Ala Trp
    8525                 8530                 8535


Pro Thr  Thr Trp Pro Thr Thr  Arg Thr Ser Arg Thr  Ser Ala Ala
    8540                 8545                 8550


Arg Ala  Cys Ser Ser Ala Thr  Ala Ala Ala Thr Ser  Ala Arg Arg
    8555                 8560                 8565


Thr Ala  Pro Trp Pro Ala Thr  Pro Ser Cys Ala Arg  Pro Arg Ser
    8570                 8575                 8580


Ser Ala  Pro Ser Ser Cys Lys  Ala Pro Ala Arg Ala  Arg Gly Val
    8585                 8590                 8595


Asn Ser  Pro Arg Gly Cys Gly  Pro Arg Pro Thr Cys  Ala Ser Ser
    8600                 8605                 8610


Cys Pro  Arg Thr Thr Ile Pro  Ser Arg Ser Gly Ser  Thr Arg Thr
    8615                 8620                 8625
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Asn Pro  Ser Arg Pro Arg Pro  Ser Cys Arg Pro Ala  Ser Ser Pro
    8630                 8635                 8640

Arg Gly  Pro Ser Trp Pro Asn  Cys Lys Pro Ser Arg  Asn Pro Ala
    8645                 8650                 8655

Lys Asn  Phe Cys Lys Arg Ala  Thr Gly Ser Thr Trp  Thr Pro Arg
    8660                 8665                 8670

Pro Glu  Arg Ser Ser Thr Pro  Ala Ser Pro Arg Met  Pro Arg Gly
    8675                 8680                 8685

Ser Ser  Lys Lys Leu Lys Val  Glu Leu Pro Pro Pro  Pro Glu Asp
    8690                 8695                 8700

Leu Glu  Glu Asp Trp Glu Ser  Ser Gln Ala Glu Glu  Glu Glu Met
    8705                 8710                 8715

Glu Asp  Trp Asp Ser Thr Gln  Ala Glu Glu Asp Ser  Leu Gln Asp
    8720                 8725                 8730

Ser Leu  Glu Glu Glu Asp Glu  Val Glu Glu Ala Glu  Glu Glu Ala
    8735                 8740                 8745

Ala Ala  Ala Arg Pro Ser Ser  Ser Ala Glu Glu Glu  Lys Ala Ser
    8750                 8755                 8760

Ser Thr  Asp Thr Ile Ser Ala  Pro Gly Arg Gly Arg  Gly Gly Arg
    8765                 8770                 8775

Ala His  Ser Arg Trp Asp Glu  Thr Gly Arg Phe Pro  Asn Pro Thr
    8780                 8785                 8790

Thr Gln  Thr Gly Lys Lys Glu  Arg Gln Gly Tyr Lys  Ser Trp Arg
    8795                 8800                 8805

Gly His  Lys Asn Ala Ile Val  Ser Cys Leu Gln Ala  Cys Gly Gly
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Asn Ile  Ser Phe Thr Arg Arg  Tyr Leu Leu Phe His  Arg Gly Val
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Asn Phe  Pro Arg Asn Ile Leu  His Tyr Tyr Arg His  Leu His Ser
    8840                 8845                 8850

Pro Tyr  Tyr Cys Phe Gln Glu  Glu Ala Glu Thr Gln  Gln Gln Gln
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Gln Gln  Gln Lys Thr Ser Gly  Ser Ser Lys Ile His  Ser Gly Gly
    8870                 8875                 8880

Arg Trp  Thr Glu Asp Arg Gly  Glu Arg Ala Gly Ala  Asp Pro Gly
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Ala Glu  Glu Pro Asp Leu Ser  His Pro Leu Cys His  Leu Pro Ala
    8900                 8905                 8910

Glu Ser  Gly Ala Arg Ala Gly  Thr Glu Ser Gln Glu  Pro Phe Ser
    8915                 8920                 8925

Ala Leu  Ala His Pro Gln Leu  Ser Val Ser Gln Glu  Arg Arg Pro
    8930                 8935                 8940

Thr Ser  Ala His Ser Arg Gly  Arg Arg Gly Ser Leu  Gln Gln Val
    8945                 8950                 8955

Leu Arg  Ala His Ser Arg Val  Ala Arg Ala Arg Pro  His Thr Glu
    8960                 8965                 8970

Lys Gly  Gly Asn Tyr Val Thr  Thr Cys Ala Leu Arg  Pro Thr Ile
    8975                 8980                 8985

Ile Met  Ser Lys Glu Ile Pro  Thr Pro Tyr Met Trp  Ser Tyr Gln
    8990                 8995                 9000

Pro Gln  Met Gly Leu Ala Ala  Gly Ala Ala Gln Asp  Tyr Ser Thr
    9005                 9010                 9015
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Arg Met  Asn Trp Leu Ser Ala  Gly Pro Ala Met Ile  Ser Arg Val
    9020                 9025                 9030

Asn Asp  Ile Arg Ala His Arg  Asn Gln Ile Leu Leu  Glu Gln Ser
    9035                 9040                 9045

Ala Ile  Thr Ala Thr Pro Arg  His His Leu Asn Pro  Arg Asn Trp
    9050                 9055                 9060

Pro Ala  Ala Leu Val Tyr Gln  Glu Ile Pro Gln Pro  Thr Thr Val
    9065                 9070                 9075

Leu Leu  Pro Arg Asp Ala Gln  Ala Glu Val Gln Leu  Thr Asn Ser
    9080                 9085                 9090

Gly Val  Gln Leu Ala Gly Gly  Ala Ala Leu Cys Arg  His Arg Pro
    9095                 9100                 9105

Ala Gln  Gly Ile Lys Arg Leu  Val Ile Arg Gly Arg  Gly Thr Gln
    9110                 9115                 9120

Leu Asn  Asp Glu Val Val Ser  Ser Ser Leu Gly Leu  Arg Pro Asp
    9125                 9130                 9135

Gly Val  Phe Gln Leu Ala Gly  Ser Gly Arg Ser Ser  Phe Thr Pro
    9140                 9145                 9150

Arg Gln  Ala Val Leu Thr Leu  Glu Ser Ser Ser Ser  Gln Pro Arg
    9155                 9160                 9165

Ser Gly  Gly Ile Gly Thr Leu  Gln Phe Val Glu Glu  Phe Thr Pro
    9170                 9175                 9180

Ser Val  Tyr Phe Asn Pro Phe  Ser Gly Ser Pro Gly  His Tyr Pro
    9185                 9190                 9195

Asp Glu  Phe Ile Pro Asn Phe  Asp Ala Ile Ser Glu  Ser Val Asp
    9200                 9205                 9210
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Gly Tyr  Asp Met Ser His Gly  Gly Ala Ala Asp Leu  Ala Arg Leu
    9215                 9220                 9225

Arg His  Leu Asp His Cys Arg  Arg Phe Arg Cys Phe  Ala Arg Asp
    9230                 9235                 9240

Leu Ala  Glu Phe Ala Tyr Phe  Glu Leu Pro Glu Glu  His Pro Gln
    9245                 9250                 9255

Gly Pro  Ala His Gly Val Arg  Ile Val Val Glu Gly  Gly Leu Asp
    9260                 9265                 9270

Ser His  Leu Leu Arg Ile Phe  Ser Gln Arg Pro Ile  Leu Ala Glu
    9275                 9280                 9285

Arg Glu  Gln Gly Gln Thr Leu  Leu Thr Leu Tyr Cys  Ile Cys Asn
    9290                 9295                 9300

His Pro  Gly Leu His Glu Ser  Leu Cys Cys Leu Leu  Cys Thr Glu
    9305                 9310                 9315

Tyr Asn  Lys Ser Asp Gln Arg  Leu Leu Arg Thr Ser  Val Cys Ser
    9320                 9325                 9330

Cys Tyr  Gln Pro Val Pro Val  Leu His Arg Glu Arg  Asp Arg Ala
    9335                 9340                 9345

Pro Ala  Pro Val Ala Pro Gln  Glu Val Pro His Leu  Ala Val Pro
    9350                 9355                 9360

Gly Leu  Ser Asp Arg Arg Cys  Gln Pro Leu Arg Gln  Arg Arg Ser
    9365                 9370                 9375

Pro Ala  Glu Arg Pro Cys Gln  Pro Tyr Phe Phe His  Pro Gln Lys
    9380                 9385                 9390

Gln Ala  Pro Ala Leu Pro Thr  Leu Pro Pro Arg Asp  Leu Ser Val
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Arg Leu  Gly Thr Leu Pro Ser  His Leu Pro Pro Asp  Pro Glu Tyr
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His Ser  Val Ala Pro Arg Tyr  Gln Pro Asn Tyr Pro  Pro Thr Pro
    9425                 9430                 9435

Pro Ser  Arg Pro Arg Thr Cys  Thr Glu Leu Glu Lys  Tyr Ala Thr
    9440                 9445                 9450

Ile His  Ala His Ile Arg Leu  Gly Arg Ala Thr Ala  Thr His Ala
    9455                 9460                 9465

Pro Arg  Tyr Leu Leu Gln Ser  Asn Arg Arg Arg Leu  Thr His Trp
    9470                 9475                 9480

Pro Thr  Thr Thr Ser Thr Thr  Phe Ser Trp Thr Trp  Thr Ala Ala
    9485                 9490                 9495

Pro Arg  Ser Ser Asp Ser Pro  Asn Phe Ala Phe Ala  Ser Ser Arg
    9500                 9505                 9510

Arg Glu  Pro Ser Arg Ser Cys  Arg Thr Ala Pro Ser  Thr Ser Ala
    9515                 9520                 9525

Arg Lys  Ala Ser Ser Ala Trp  Asn Arg Pro Arg Ser  Pro Thr Arg
    9530                 9535                 9540

Ser Pro  Arg Pro Thr Ile Ala  Ser Pro Thr Ser Ser  Cys Ser Ser
    9545                 9550                 9555

Ala Arg  Ser Ser Pro Ala Trp  Ser Glu Ser Thr Pro  Ser Ser Ser
    9560                 9565                 9570

Pro Ser  Ser Arg Ala Ile Pro  Arg Gly Ala Ser Thr  Ala Pro Ala
    9575                 9580                 9585

Thr Pro  Pro Thr Ala Ser Thr  Leu Ser Arg Pro Ser  Ala Ala Ser
    9590                 9595                 9600
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```
Ala Thr  Ser Ser Pro Thr Asn  His Pro Leu Ile Gln  Asn Lys Tyr
    9605                 9610                 9615


His Ile  Asp Asp Asp Leu Asn  Lys Lys Ser Phe Asp  Leu Lys Arg
    9620                 9625                 9630


Tyr Asn  His Ile Asp Asp Leu  Ser Phe Lys Lys Arg  Ile Thr Tyr
    9635                 9640                 9645


Leu Lys  Ser Asp Thr Arg Ser  Leu Ser Met Phe Ser  Ala Asn Thr
    9650                 9655                 9660


Thr Ser  Leu Pro Ser Ser Gln  Leu Trp Tyr Cys Arg  Pro Arg Arg
    9665                 9670                 9675


Ala Ala  Asn Phe Leu His Thr  Leu Lys Gly Met Ser  Asn Ser Ser
    9680                 9685                 9690


Cys Pro  Ser Ile Phe Ile Leu  Ser Ser Ile Arg Cys  Pro Lys Ser
    9695                 9700                 9705


Ala Ser  Gly Trp Met Met Thr  Ser Thr Pro Ser Thr  Pro Thr Met
    9710                 9715                 9720


Gln Thr  Thr His Arg Pro Cys  Pro Ser Ser Thr Pro  Pro Ser Ser
    9725                 9730                 9735


Leu Gln  Met Asp Ser Lys Arg  Ser Pro Trp Gly Cys  Cys Pro Cys
    9740                 9745                 9750


Asp Trp  Leu Thr Pro Ser Pro  Pro Arg Thr Gly Lys  Ser Pro Ser
    9755                 9760                 9765


Ser Trp  Glu Arg Gly Trp Thr  Ser Thr Pro Arg Glu  Asn Ser Ser
    9770                 9775                 9780


Pro Thr  Arg Pro Pro Arg Pro  Pro Pro Leu Ser Val  Phe Pro Thr
    9785                 9790                 9795
```

```
Thr Pro  Phe Pro Leu Thr Trp  Ile Pro Leu Phe Ile  Pro Lys Met
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Glu Asn  Tyr Pro Tyr Lys Phe  Leu His Arg Thr Tyr  Asn Gln Pro
    9815                9820                9825

Phe Thr  His Leu Leu Met Asp  Gln Val Asp Val Val  Ala Leu Leu
    9830                9835                9840

Leu Gln  Tyr Ser Trp Pro Leu  His Ser Leu Leu Met  Lys Lys Glu
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Ile Leu  Lys Leu Thr Pro Val  Val His Gln Leu Met  Gln Val Asp
    9860                9865                9870

Leu Val  Ser Thr Ala Lys Glu  Gly Ser Leu Ser Leu  Pro Gln Glu
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Met Gln  Leu Lys Ala Thr Ala  Gly Leu Lys Val Asp  Leu Lys Val
    9890                9895                9900

Met Ala  Leu Gln Thr Leu Ala  Glu Asp Trp Asn Leu  Glu Pro Leu
    9905                9910                9915

Val Gln  Arg Leu Met Ser Gln  Met His Thr Gln Phe  Lys Leu Asn
    9920                9925                9930

Trp Val  Leu Ala Leu Pro Leu  Thr Val Gln Ala Pro  Leu Leu Leu
    9935                9940                9945

Gly Thr  Lys Arg Met Ile Asn  Leu His Tyr Gly Pro  Gln Pro Thr
    9950                9955                9960

Pro Arg  Gln Ile Ala Lys Tyr  Thr Leu Lys Lys Met  Pro Asn Ser
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His Phe  Ala Gln Ser Val Glu  Val Lys Phe Trp Val  Leu Leu Tyr
    9980                9985                9990
```

```
Trp Gln  Ile Met Glu Val Ser   Thr Gln Ser Gln Thr   Gln Ala Leu
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His Ser   Ser Pro Ser Ser Leu   Met Gln Val Glu Phe   Cys Ala Ala
    10010                10015                10020


Pro His   Thr Lys Asn Ile Gly   Thr Ser Glu Arg Glu   Met Leu His
    10025                10030                10035


Leu Leu   Ser Pro Ile Leu Met   Leu Val Leu Cys Leu   Thr Arg Pro
    10040                10045                10050


Ile Leu   Lys Thr His Leu Gln   Leu Gln Lys Ala Ile   Leu Ser Val
    10055                10060                10065


Lys Phe   Ile Ser Met Gly Met   Arg Pro Asn His Cys   Leu Leu Leu
    10070                10075                10080


Leu Met   Lys Leu Arg Met Gln   Leu Ala Pro Thr Val   Ser Leu Phe
    10085                10090                10095


Asn Gly   Asn Gly Ile Val Leu   Ser Thr Gln Val Lys   His Leu Leu
    10100                10105                10110


Pro Ala   Pro Ser Pro Ser Pro   Thr Ser Pro Lys Asn   Glu His Cys
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Ile Pro   Pro Cys Met Pro Thr   Leu Pro Thr Pro Leu   Cys Leu Trp
    10130                10135                10140


Lys Lys   Leu Ser Thr Lys Asn   Lys Val Gln Val Phe   Tyr Phe Asn
    10145                10150                10155


Ser Phe   Thr Gly Phe Glu Gln   Leu Phe Phe Leu His   Pro Pro Arg
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Thr Trp   Asn Thr Pro Pro Ser   Pro Pro Ala Gln Pro   Thr Ser Glu
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Cys His   Trp Trp Thr Cys Phe   Trp Ser Pro Arg Ser   Thr Gln Phe
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Gln Ser   Glu Pro Val Ser Gly   Arg Ser Gly Arg Asn   Pro Pro Gly
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Thr Pro   Ala Ser Ala Pro His   Ser Ser Thr Ala Glu   Asp Cys Pro
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Arg Trp   Ser Gly Ser Arg Leu   Ser Gly Arg Ser Arg   Arg Ala Ala
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Val Gly   Ile Ile Val Arg Glu   Arg Asp Arg Pro Val   Val Ser His
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Gln Ala   Pro Gln Gln Ser Leu   Pro Pro Pro Leu Arg   Gln Ala Ala
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Ala Gln   Gly Val Arg Val Gln   Gly Leu Pro Gln His   Asp Ala His
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Gly Pro   Gln His Gln Ser Ser   Gly Ala Ala Gly Ala   Ala Ala His
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Ala Asp   Leu Ala Gln Val Ala   Ala Val Arg Ala Thr   Gln Asp His
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Gln Val   Val Gln Gln Ser Ile   Val Gln His Ala Pro   Ala Glu Thr
    10325                 10330                 10335

His Arg   Gly Lys Asp Ala Thr   His Val Ala Val Val   Pro Asp Pro
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Gln Val   Asn Gln Val Ala Leu   Pro Pro Glu His Ala   Ala His Val
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His Asp   Leu Leu Gly His Val   Ala Val His His Leu   Pro Val Pro
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His His   Pro Leu Val Glu His   Ala Ala Pro Asp Asp   Pro Ala Glu
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Pro Gln   Gly Gln His Arg Pro   Ala Arg His Ala Ala   Lys Arg Pro
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Arg Val   Pro Ala Met Ala Met   Glu Asp Pro Pro Leu   Val Pro Val
    10415                10420                10425

Asp His   Leu Gly Ala Glu Gln   Val Tyr Val Gly Thr   Ala Gln Ala
    10430                10435                10440

Tyr Ala   His Ala Ser Leu Gln   His Ser Gln Leu Leu   Gly Gly Gln
    10445                10450                10455

Asn His   Ile Pro Gly His Gly   Glu Leu Leu Gln Asp   Ser Glu Pro
    10460                10465                10470

Arg Arg   Thr Gly Gln Ser Ser   His Ile Thr Tyr Ile   Val His Gly
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Gln Gly   Ile Ala Ile Arg Gln   His Arg Val Ile Leu   His Gln Arg
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Ser Ala   Gly Leu Gly Leu Leu   Thr Ala Trp Gly Gly   Arg Pro Ile
    10505                10510                10515

Arg Val   Met Ala Gly Arg Gly   Ser Cys Ser Arg Pro   Cys His Asp
    10520                10525                10530

Ala Val   Ala Phe Gly His Phe   Arg Thr Cys Cys Ser   Arg Thr Trp
    10535                10540                10545

Ser Gly   Arg Cys Thr Pro Ile   Ala Gly Gly Gly Pro   Gly Ala Trp
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Asn Ala   Arg Cys Asn Cys Lys   Thr Ala Thr Leu Ser   Asp Arg Ala
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Ala Asp   Leu Gly Pro Gln Glu   Arg Ser His His Ala   Leu Ser His
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Arg Pro   Pro Trp Asn Gly Pro   Asp Pro Ala Arg Cys   Asn Phe Val
    10595                10600                10605

Gly Phe   Arg Arg Arg Gly Arg   Glu Glu Gln Glu Glu   Pro Leu Thr
    10610                10615                10620

Phe Asn   Pro Asn Gly Leu Gly   Ala Leu Gln Asn Glu   Gly Arg Gly
    10625                10630                10635

Asp Gly   Thr Ser Arg Pro Arg   Cys Val Gly Gly Lys   Gln Pro Gly
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Gln Arg   Tyr Gly Ser Arg Asp   Val Pro Arg Trp Leu   Pro Ala Lys
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Pro Pro   Arg Ala His Pro Glu   Thr Arg Gln Arg Lys   Arg Glu Gly
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Ser Leu   Ile Pro Gln Ser Ser   Cys Tyr Thr Pro Ala   Pro Ser Pro
    10685                10690                10695

Asp Asn   Phe His Phe Ser Ser   Leu Glu Phe Glu Leu   Val Pro Glu
    10700                10705                10710

Val Asn   Pro Ser Gln Pro Arg   Ala Arg Ala Glu Arg   Pro Pro Pro
    10715                10720                10725

Ala Phe   Leu Ser Thr Pro Ser   Phe Gln Asp Ile Leu   Leu Leu Val
    10730                10735                10740

His Leu   Gln Gln Ile Asp Lys   Arg Asn Ile Lys Ile   Ser Ala Ala
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Ile Pro   Lys Leu Leu Pro Gln   Gln Leu Val Leu Phe   His Ile Leu
    10760                10765                10770
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Ser Glu   Ile Phe Ser His Arg   Thr Thr Arg Asn Lys   Ile Arg Ala
    10775                10780                10785

Ser His   Ser Thr Asp Lys Pro   Lys Ser Ser Pro Val   Ser Ile Ala
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Lys Cys   Lys Thr Ala Ile Ser   Met Leu Ala Arg Pro   Gly Asp Ile
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Phe Gln   Ile Thr Gly Gln Lys   Ile Thr Gln Ala Ile   Phe Lys Lys
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Ile Asn   Lys Arg Lys Ile Leu   Gln Val His Val Ser   Leu Gly Asn
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Asn Asp   Glu Val Asn Ala Ser   Gly Ala Phe Gln His   Gly Leu Ala
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Asp Leu   Lys Thr Lys Asn Lys   Thr Leu Asn His Ala   Ser Leu Ala
    10865                10870                10875

Asn Arg   Trp Val Asn Arg Ser   Leu Gln His Gln Ala   Gly His Gly
    10880                10885                10890

Val Ser   Gly Ala Thr Leu Val   Lys Ile Val Ala Met   Ile Glu Asn
    10895                10900                10905

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